MORTIMER'S
OBJECT LESSON NOTES

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THE WATERLOO SERIES.

OBJECT LESSON NOTES

FOR

INFANTS AND THE LOWER STANDARDS

BY

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PREFACE.

The following "Notes of Lessons" are not given as models of such, but rather as examples of the manner in which the lessons should be given. Hence the "Notes" are full of questions and answers, it being my object to show how the children are led from one point to another.

Teachers must not expect that if they give these lessons they will always obtain the same answers; thereby showing the necessity that every teacher *must prepare* her own lessons to suit her own children and their surroundings.

These lessons are only intended as a guide, as, indeed, all "notes of lessons" should be.

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INSTRUCTION OF INFANTS.

CIRCULAR TO H.M. INSPECTORS.

EDUCATION DEPARTMENT, WHITEHALL,
6th February, 1893.

SIR,

You will have observed that in the Education Code of 1892, teachers holding either the Elementary or Advanced Certificates of the National Froebel Union are allowed to rank as assistant teachers in infant schools under inspection. And you will doubtless have rightly inferred from this concession that the Department are desirous of giving further encouragement to the employment of Kindergarten methods.

The circumstances of infant schools have altered considerably in the last few years; the numbers in the lower classes having increased (especially in schools which have accepted the Fee Grant, and have consequently either abolished or largely reduced their school fees) a full four years' attendance at the infant school will be the rule and not the exemption. The improvement also shown in passing the standards at an earlier age than formerly gives to infant schools greater liberty and leisure in developing natural methods of education.

As regards the Elementary Subjects the conditions of the Code are fully satisfied if the scholars over seven can pass, as a rule, in the First Standard; nothing more should be attempted in these subjects in the infant schools, except in the few cases in which scholars are allowed to be retained for the work of the Second Standard. The scholars in the lower classes of infant schools may therefore be relieved from any premature preparation for those subjects on methods ill-suited to their tender age.

Two leading principles should be regarded as a sound basis for the education of early childhood:

(1) The recognition of the child's spontaneous activity, and the stimulation of this activity in certain well-defined directions by the teachers.

(2) The harmonious and complete development of the whole of a child's faculties. The teacher should pay especial regard to the love of movement, which can alone secure healthy physical conditions; to the observant use of the organs of sense, especially those of sight and touch; and to that eager desire of questioning which intelligent children exhibit. All these should be encouraged under due limitations, and should be developed simultaneously, so that each stage of development may be complete in itself.

It has been strongly urged that sufficient attention has not been paid in the past to these principles; indeed, it is often found that the Kindergarten Occupations are treated as mere toys, or amusing pastimes, because they are attractive for children, and the intellectual character of the "Gifts of Froebel" is disregarded, whereas the main object of these lessons is to stimulate intelligent individual effort.

You should direct the attention of teachers to the chief consideration which underlies true methods of infant teaching, viz., the association of one lesson with another through some one leading idea or ideas. The reading lessons, occupations, and object lessons may all be usefully combined for one purpose, *e.g.*, if the teacher wishes to impress on her class some knowledge of a domestic animal, she may usefully combine the object lesson for general study of its structure; the reading lesson for a knowledge of its habits and character; some occupation, such as pricking the outline, to impress an exact knowledge of its form; a song or simple story bearing on its association with human life; so that familiarity with animals, especially with domestic animals, and a kind treatment of them may be fostered.

On the other hand you should caution teachers against the mere repetition of the same exercises and lessons; the progressive character of the whole scheme of instruction should be constantly kept in view; and each exercise should lead up to something beyond itself.

Pictures and flowers have been wisely introduced of late in greater abundance into infant schools and have added much to their cheerfulness and attractiveness. They should be frequently taken down into the class, and made the subject of conversation. It is not enough that the children should be taught to observe these things and to answer questions upon them. They should be encouraged in every way to give expression in their own words to what they know, what they want to know, and what they think.

It will be found that the Elementary Subjects when taught on right methods can be treated with greater variety; Reading becomes a Kindergarten lesson through pictures and word building; Writing becomes a variety of Kindergarten drawing; elementary exercises in Number are associated with many of the Kindergarten occupations.

It is the experience of many good teachers that by the adoption of such methods it is found to be unnecessary before the sixth year is passed to employ books for Reading, except occasionally for a change of occupation, or perform any exercise in Writing except the elements of letters, or to do any formal Arithmetic work on slates.

It may reasonably be hoped that the observance of these suggestions will materially improve the work of the younger children in infant schools and classes, by relieving the teacher from that useless sub-division in the elementary subjects, which has been hitherto generally employed, and by rendering the instruction less formal, but more varied and attractive.

A list of Varied Occupations is appended to this Circular.

I have the honour to be, Sir,
Your obedient Servant,
G. W. KEKEWICH.

The following list of Varied Occupations may serve as a guide to teachers especially in infant schools or classes which may be divided into two sections for those lessons.

A.—What Children between the ages of five and seven can do:—
- Games with Music.
- Games without Music (Guessing Games, &c.; Taking Messages).
- Picture Lessons.
- Object Lessons.
- Story Lessons, *e.g.*, stories from History; Grimm's Household Tales.
- Recitations.
- Paper Folding.
- Mosaic with coloured paper; use of gum.
- Drawing. Brush Drawing.
- Plaiting paper.
- Ruling simple Geometrical Forms.
- Measuring length. Estimating length.
- Weighing. Estimating weight.
- Setting a table (carrying a glass of water without spilling it. Moving cups without breaking them).
- Modelling in Clay.
- Basket Work.
- Cutting out patterns and shapes with scissors.
- Word Building.
- Number Pictures, with cubes, beads, &c.

B.—What Children between three and five years of age can do:—
- Games with Music.
- Games without Music (Guessing Games, &c.).
- Recitations—Nursery Rhymes, &c.
- Picture Lessons (Learning to answer in complete sentences as to what they can see in a picture).
- Paper Folding.
- Mosaic with coloured tablets.
- Drawing.
- Matching colours (picking out the same shades of wool from a heap of remnants).
- Plaiting paper.
- Working patterns with needle and worsted.
- Threading beads in twos, threes, &c.
- Arranging shells in twos, threes, &c.
- Arranging "Pictures of Number" with cubes.
- Word Building.

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NOTES OF LESSONS FOR INFANTS.

INTRODUCTION.

The latest requirements of the Education Department will undoubtedly cause less direct attention to be given to "the three R's" than has generally been the practice in our infant schools. Three things are now required:—

1. Children must receive suitable instruction in reading, writing, and arithmetic.

2. Simple lessons on objects and on the phenomena of nature and of common life.

3. Appropriate and varied occupations.

This is a step in the right direction, since it will cause the infant school to take its proper position as the training and developing department of the upper school.

The first of the above requirements has been attended to by most teachers; in fact, too much time has been spent in forcing these subjects on the children, and thereby checking their natural intellectual development. Had less time been devoted to them, and more to those required in (2) and (3) of Art. 106 (*b*), the children would, by their greater intelligence power of observation, imitation, accuracy, etc., be in a better position to receive them. It would also be found that the elements of these subjects having been mastered in less time, and by more pleasant methods, a love of learning has been implanted, and a thirst for knowledge created in the children, which will greatly assist them in overcoming the more arduous work of the advanced school.

In order to fulfil the new requirements it is necessary for the teacher to draw up a course of lessons embracing the different subjects, and, having prepared this, to so arrange her time-table that she can give a certain part of each day to this collective instruction. She must not consider that each half-hour thus given is so much time lost to "the three R's," but should look upon it as indirectly assisting them; *e.g.* object lessons greatly help the reading, spelling, and writing, and for elementary arithmetic there is no system better than the Kindergarten, as will hereafter be shown. Supposing a teacher to give half an hour every day, or even only on three days per week, a great many lessons would be given to the children, and much useful information imparted; then she might devote the half-hours on the other two days to (3) appropriate and varied occupations. The three half-hours a week would be about 132 half-hours or object lessons in the school year; and the two half-hours per week would be 88 half-hours, or lessons in Kindergarten.

From the circular to H.M. Inspectors, dated 6th August 1883, we ascertain that (2) includes lessons on animals, objects, common employments, form, colour, food, plants, clothing; on simple facts in nature, as rain, frost, the seasons; on familiar scenes in common life, as the post-office, a shop, railway, etc.; and that (3) would be fulfilled by the exercises usually known as those of the Kindergarten. Under the head of Kindergarten, all lessons in form, colour, and elementary number should be given. Thus a teacher is actually teaching one of "the three R's" while fulfilling one of the new requirements. Such lessons might appear on the time-table as Kindergarten (form), Kindergarten (colour), Kindergarten (number).

The teacher should look upon the Kindergarten as a system of education by means of which she is to *teach* these and other subjects, and not as a system which teaches only how to build, fold, plait, etc. In teaching number the ball-frame is generally used—the teacher doing all the work, and the children sitting or standing still, looking and repeating. How much better for each child to have a box of cubes, a tray of beads, or bundle of sticks, to count, add, and subtract; touching the object and counting at the same time must give him a better idea than simply looking and counting. The child really associates the number with the object, and thus, when he says three, not only knows the number, but has a clear idea of it, and is able to bring three articles to you when required. How many children are able to repeat very high numbers without having any conception of the value of low ones!

In teaching form, the children have the various gifts to handle, *e.g.* the balls of gift I. give the idea of roundness; then follows the cube, with its faces, edges, and corners, all to be recognised, named, counted, and touched. In teaching colour, the balls of gift I., being of different colours, are most useful, and in many of the succeeding gifts the combination of colours is largely introduced. Besides the above, many lessons on objects should be given while using the gifts of the Kindergarten; *e.g.* children build a sofa with the cubes: it is immediately compared with a real sofa, resemblances and differences pointed out, the parts named and described, the uses of the sofa and the various materials employed in its construction noted.

Here you are not only making the children observe minutely, compare, and answer correctly, but you are at the same time giving them an object lesson on the sofa.

Before commencing the set of object lessons, it would be advisable to give the children some clear ideas of the different qualities which must necessarily occur in describing the various articles that will form the subjects of the lessons. This will be so much time saved in the actual lessons, for when any of the said qualities occur, the children, having already had their attention directed to them, will readily recognise them, and the thread of the lesson will not be broken by going aside to explain any of these terms.

There may doubtless be teachers who disagree with the above suggestion, but experience proves that such lessons are of the greatest use in cultivating the powers of observation, perception, and comparison in children.

The most important of these qualities are :—

Inflammable, soluble, fusible; porous, absorbent, waterproof; opaque, transparent, translucent; stiff, flexible, elastic; brittle, tough, durable; granulous, friable, fibrous; solid, liquid, fluid. These qualities should be taken in groups according to their correlative influence on the faculty of observation.

EXAMPLE OF A LESSON.

Inflammable, Soluble, Fusible.

I. **Inflammable.**—Teacher to have a candle—a spirit-lamp would be better. Require a child to light the candle; teacher to hold a piece of paper in the flame of the candle and ask children what they notice about it. They will see that the paper burns with a flame. The children to name other things that burn with a flame—the candle and match have already been mentioned—wood, coal, gas, lampwick. By questioning, lead the class to discover that some things require a greater amount of heat than others to make them burn: *e.g.* paper will burn if held in the candle, but coal will not. Children then told that anything that burns with a flame is said to be inflammable. This sentence to be written on the blackboard. Children to repeat it several times, and to name other things that are inflammable.

II. **Soluble.**—Teacher to put a piece of sugar into a tumbler of water (in order to save time, the teacher should do this before completing the previous section). Hold up the glass; ask what it contains. What was put into the water? Where is it now? They cannot see it. Let a child taste the water. He finds that it has a sweet taste. The sugar has dissolved and mixed with the water. Children then required to name other things that will dissolve in water—salt, soda, alum, blue, etc.

If children should name starch, cornflour, etc., they should be shown that they do not really dissolve. Children then told that anything that will dissolve in water is said to be soluble. This definition to be written on the blackboard and learnt by the children, and other examples given.

III. **Fusible.**—Teacher to hold a piece of sealing-wax in the flame of the candle. Children to say what they notice. It burns, and some of it falls down—it melts. What causes it to melt? Children to name other things that melt when put in the flame, such as wax, tallow, lead, iron. Here, again, they will see that different degrees of heat are required to cause the melting to take place.

Children to be told that anything that can be melted is said to be fusible. This to be written on the blackboard, and learnt by the children, and other examples given.

The other qualities should be treated in the same way as the above three, viz. :—1st. Develop the idea of the quality; 2nd. Definition made up and learnt; 3rd. Examples proving that the development of the idea and the deduced definition are fully comprehended by the children.

In advising that these lessons should be given to the children before commencing their course of object lessons, it should be borne in mind that they are not intended for the youngest children in the school.

In this division (the youngest children) the lessons are purely conversational, and the language of the simplest character, and all the objects and illustrations chosen from the child and his immediate surroundings. *E.g.* the children, under the guiding influence of the teacher, should be led to talk about themselves, and thus gradually learn the name, shape position, and use of some of the principal parts of the body. Their clothes might form subjects of conversation; their homes—the furniture of the kitchen, bedroom, etc.; the dinner-table, the tea-table; their toys; the school-room, the play-ground, the road to school. A few of the domestic animals might also be introduced.

The following list of lessons will probably meet the requirements of Article 106 b (2), viz. :—" Simple lessons on objects, the phenomena of Nature, and of common life." It may prove of use to teachers if even they only select from it "the thirty or forty collective lessons" mentioned in the circular to H.M. Inspectors.

Teachers should consider in choosing their lessons the surroundings of the children, whether in town or country, and the occupations and conditions of the parents.

The object lessons will produce better results and be more beneficial to the children if familiar things are introduced, and their natural knowledge and experience made use of.

I. **Objects.**—Under this will be included, animals, plants, minerals, and miscellaneous objects.

(*a*) **Animals.**—Horse, donkey, cow, sheep, cat, dog, goat, elephant, camel, lion, tiger, bear; hen, duck, ostrich, stork, sparrow, swallow, pigeon; bees, beetle, spider, silkworm; herring, cod, oyster, shrimp.

(*b*) **Plants.**—Parts (root, stem, leaves, flowers, seed, wood, and bark); uses. Potato, turnip, and carrot, onion, cabbage, peas and beans, corn plants; tea, coffee, sugar, rice; apple and pear, orange and lemon, flowers.

(*c*) **Minerals.**—Coal, iron, gold, silver, copper, chalk, salt.

(*d*) **Miscellaneous.**—Glass, baskets, water, milk, glue, coins, cork, a match, an egg, leather, sponge, food, and clothing.

II. **Phenomena of Nature.**—Rain, snow, frost, clouds, wind; sun, moon, stars; night and day, the week; spring, summer, autumn, winter.

III. **Scenes of Common Life.**—A shop, railway, market, warehouse, a garden, a farm, modes of conveyance, writing a letter, washing, usefulness of children at home, parts of house and uses, means of lighting and warming.

IV. **Common Employments.**—Shoemaker, baker, tailor, builder, glazier, painter, carpenter, fisherman, postman, porter, the errand boy, the servant maid, paper-making, cotton-weaving.

It will be noticed that form and colour are not mentioned in the above list of object lessons. They have been purposely omitted so as to include them in the Kindergarten, *i.e.* their natural place.

In order that these lessons may be profitable to the children, the teacher must be furnished with a proper supply of specimens, apparatus, diagrams, etc. Where possible, real objects should be obtained, but these failing, the nearest possible substitute for them in the form of good models, no matter how simple if correct, or reliable pictures.

The first requisite is a cupboard or box in which to keep all these articles. This being obtained, the teacher should proceed with her collection. In doing this she should secure the goodwill and hearty co-operation of the children. Many specimens will thus be obtained, and at the same time the interest of the children is aroused. Much useful information may be gained and many specimens collected by a visit to a large factory. The teacher should also enlist the sympathy of school managers and friends in the school collection. They, from their various occupations, experience, and position, will undoubtedly be able to add greatly to the store. A visit to a large toy-shop would enable the teacher to enlarge her collection by india-rubber animals, various sets of furniture for the dolls' houses, vehicles, tools, etc. Useful boxes containing a collection of objects can be obtained at the Depository of the Home and Colonial College and various other depôts for school apparatus, etc.

The following sketch is an example of a lesson suited to the youngest children. No doubt, to the majority of the class, the names of these parts (head, body, and limbs) will be known, but the teacher should bear in mind that though she wishes the children to know the names of the parts of the body, yet her chief aim is to direct them to notice carefully and to be able to express in correct language what they observe.

In getting the children to talk about themselves you are helping them to feel at ease, and thus placing them in a better position to observe with interest, and to want to talk when less familiar objects are brought before them. Children are very fond of talking about what they know, and the teacher, while directing them to the subject under consideration, should be careful not to discourage the little ones by hasty expressions of word or manner, even when what they say is irrelevant. Depend upon it, the child's mind sees some connection between what was said and the object which called forth the remark. Remember that when once, even in a slight degree, the sensitiveness of a child has been hurt, great harm has been done, and it will be a long time before he recovers his natural ease and disposition and will be able to fully trust his thoughts to the teacher.

PARTS OF THE BODY.

Class—The Babies.

The teacher, having called a child to the front of the class, says: Now, children, let us have a little talk about ourselves. Look at this little boy and tell me what part of him I am touching. (His head.) Each of you touch your head, and say, "Each of us has a head." The teacher then, by touching the hair, eyes, nose, mouth, and ears, would get the children to do the same, and repeat the name of the part touched. Look again at this little boy and tell me what part of him I am touching. (His arms.) How many arms has he? Look at yourselves and tell me how many arms you have. Repeat, "We all have two arms." What have you at the end of your arms? (Hands.)

What part of this little boy am I now touching? (His legs.) How many legs has he? Now touch your own legs and tell me how many you have, and say, "We all have two legs." Now what have you at the end of your legs? (Feet.)

Tell the children that the arms and legs are called limbs, and let them repeat, "Our arms and legs are called limbs," and touch the parts as they are named. The teacher, pointing, to say: "Now, children, we have spoken about the head, the arms, and the legs. Can any one tell me to what they are joined? (The body.) Put your hands on your body, and say, "We all have a body."

Have you ever seen any one without a head? (No.) Or without a body? Now, have you ever seen any one without arms? Some of the children will have seen a man or boy with one arm. The children should be told that some accident caused the loss of the arm, and might be warned about being careless in their play, etc. The sympathy of the children should be directed towards any one so afflicted. The legs should be referred to in much the same way.

At the end of the lesson the children should repeat: "We have a head, a body, and limbs. Our limbs are our arms and legs."

The teacher should guard herself against entering upon the uses of the different parts of the body, and also keep from giving minute descriptions of any of these parts. These will form subjects for future lessons.

A recapitulatory lesson of the one above, partly in the form of drill, would be found very useful and interesting to the children; thus, the teacher might say: What should I tell little Mary if I wanted her to hold up her arm nearest the window? (To hold up her right arm.) Each of you hold up your right arm, and say, "I am holding up my right arm." Now, if I wanted you to hold up the other arm what should I say? (Hold up your left arm.) Each of you hold up your left arm, and repeat, "I am holding up my left arm." Several exercises should here be given to enable the children to distinguish clearly between their left and right arms.

In a similar manner they should be taught to distinguish one leg from the other. They might also have exercises with their heads, *e.g.* they might be told to bend them backwards and forwards, or to the right and left.

The following lesson will be found suitable to the elder infants:—

THE HORSE.

CLASS—ELDER INFANTS.

Apparatus:—Picture; small model, if possible, covered with natural skin; horsehair, hoof, oats, hay, chaff.

Structure.—Show picture and model, and let the children name and describe the principal parts, and then, under the direction of the teacher, notice that the head is long, and broad at the top near the eyes, and gradually narrows to the mouth; the ears are long; the eyes are large; the legs are long and slender; the foot has a hard case called the hoof. Comparison might here be made between our feet and toes and the hoofs of the horse. What do men put on the horse's hoof? Why? Does it hurt the horse to nail on his shoes? The long hair on the neck is called the mane. The body is covered with short hair. The tail is covered with very long hair. Compare this with the mane.

II. **Uses and Food.**—Ask the children where they see horses; they will probably say in the street and stable. What were these horses doing? They were drawing carts, vans, and drays; running in cabs, omnibuses, and carriages, sometimes carrying people on their backs. Children should then be questioned about the different kinds of horses used for these purposes, and be led to notice how the slight difference in their make renders them suitable for the different ways in which they are employed—*e.g.* the horses in large vans and drays are very stout and heavy, have strong legs, but are not able to run quickly; whereas the cab and carriage horses are not so stout, the legs are more slender, and they run much more quickly. Now, some of you said that you saw the horse in the stable. What is the stable? Yes; it is his house, where he eats and sleeps. Let the children notice that the horse often eats out of his stable. When does he do this? When he has to wait a long time in one place his master puts on a nosebag—this to be explained. The children will also be able to say that the horse gets water from the troughs in the streets. What does the horse eat? Oats, hay, and chaff. The children might be told that the hay is grass cut down and dried in the sun, and that chaff consists of hay and clover cut up and mixed together. The horse sometimes sleeps while standing, but likes to lie down on a nice bed of clean straw.

III. **Uses when Dead.**—The children to be asked if any use can be made of the horse when dead. The flesh is used for cat's meat; this will be familiar to them. They should be told that in some countries the flesh is eaten by men, in the same way as we eat the flesh of the cow. Horsehair is used for stuffing chairs, sofas, beds, etc. Children to notice from specimen that this hair is obtained from the mane and tail. The skin is made into leather, the bones used for manure for the garden, the hoofs for making glue.

The summary, which should consist of the leading facts mentioned, to be written on the blackboard as the lesson proceeds. The children should be asked to spell the simple words before they are written, and at the end of the lesson to read and repeat all that is on the board. It would be a good exercise for the children to have it then set for memory work, either as home lessons or during the writing lesson.

It will be noticed that this lesson is given to town children. For country children the lesson might be varied as follows:—The heavy horse of the van and dray class would be supplemented by that which works in the field, and this would have to be enlarged upon. Horses out grazing, and possibly hunting horses might be mentioned. The cab-horse would give way to the horse used in light carts and traps.

Again, in military districts children would mention the soldier's horse. This would, of course, then have to be slightly touched upon.

The donkey should be treated in a somewhat similar manner, and a comparison made between it and the horse—*e.g.* the ears, colour, tail, strength, beauty, and character. As this animal is subjected to much thoughtless cruelty, opportunities should be made by the teacher to impress upon the children the necessity of treating the donkey with kindness.

In giving a lesson on the cow, the attention of the children should be directed to the different ways in which the horse and cow eat their food. The structural difference in the hoof, mane, and tail should also be noticed.

The use of the horse as a beast of burden, etc., would here be replaced by the great value of the cow in contributing to our food. The various products of milk—cream, butter, and cheese—would have to be spoken about, although, of course, the making of butter and cheese would not here be entered upon.

PARTS OF A PLANT.

CLASS—ELDER INFANTS.

Apparatus:—A few different plants—leaves—flowers—and seeds.

I. **Parts named.**—Place a plant before the children, and let them point out the different parts—stem, branches, leaves, stalks, flower. When these parts have been named, the teacher will tell the children that the plant has other parts besides these. The teacher proceeds by taking the plant out of the flower-pot and asking the children what they see; they will probably say "mould." Their attention should be directed to the little thread-like substances in the mould, and they should be told that these little threads form the root.

The teacher should then ask the children to look carefully at a plant, the flowers of which are going to seed. One of these flowers should then be given to a child for him to open in front of the class, and the teacher should tell the children that the little things found inside are the seeds. The teacher might then hold the plant to the class and ask the children to point to other flowers going to seed. As each of the parts of the plant is named, the teacher should write the name on the blackboard, and at the end of this section the class to read, "The parts of a plant are —the root, the stem, the branches, the leaves, the flowers, and the seeds."

It is probable that the children would not name the parts in the above order. Of course the teacher would have to leave a space on the board for any of the omitted parts and fill in when named.

II. **Parts described.**—The teacher to remind the children that when they were looking at the root they noticed that it was like a number of little threads; then let the children examine it more closely and see that these threads join others, and get thicker and thicker, forming little branches, which eventually are continuous with the stem. The use of the root in supporting the plant and drawing in the necessary food should then be mentioned. Thus—the teacher to show the class a plant without a root, and put it into some mould; then let the children see how easily this may be knocked out of the ground. The wind would even blow it down. Show them how the root spreads out in all directions, and is thus able to withstand the wind, etc. Question the children what has to be done to the plant to keep it alive. (It must be watered.) Where is the water put? (On the mould.) How does this do the plant any good? (The water goes through the mould and the little threads draw it into the plant.) The root is the mouth of the plant.

The stem should then be shown, and if possible pieces of it should be given to the children, and they should be asked to describe it. If they then break it they will see that it is moist inside; the cause of this to be given. They might then be asked the use of the stem.

Now the children should be led to notice that the branches spread out into smaller ones, and these bear stalks on which are the leaves. A leaf should then be given to each child, and a description of it obtained—it is green, thin; it has an upper and under side, an edge. They will find out that they can separate the upper surface from the under, and notice that the leaf inside is quite moist.

From the different specimens shown, the class will notice that leaves are of various shapes, and vary in colour—some being light and others dark.

The flower should now follow. Let the children see how it is made—of little leaves (the petals); and the class would be able to say that these little leaves vary in number, size, shape, and colour, in different plants. Let them give examples. Ask why we like flowers in our rooms? (They are pretty.) Yes, but there is another reason why we like flowers in the room? (They smell so nice.) Let them now name flowers with sweet odours. Question the class as to where the seeds are found, and tell them that from these new plants will grow.

It will be noticed in the above lesson that the parts of the plant have only briefly been described, the object being that the children should recognise them. Separate lessons might afterwards be given on each part, describing them fully, and enlarging on their uses to man, *e.g.* the root, the different kinds, such as the fibrous (cabbage, geranium), the bulbous (turnip, onion), the tapering (carrot, beet), and the tuberous (potato). Specimens should be shown, and examples asked for. The uses of roots, such as for food, medicine, dyes, etc., should then be named.

COAL.

CLASS—ELDER INFANTS.

Apparatus:—A piece of coal, coke, a picture of furnace and of a coal-pit.

I. **Qualities.**—Show the children a piece of coal, and ask them to say all they can about it.

(*a*) By looking at it they see that it is black and bright.
(*b*) By feeling it they know that it is hard.
(*c*) By past observation they know that it is inflammable and brittle. These facts should be obtained from the children in the following way:—The class to be asked what happens to the coal when put on the fire. (It burns.) How does it burn? (With a flame.) What do we call those things that burn with a flame? (Inflammable.) Repeat "Coal is inflammable." By questioning the children you will obtain from them that coal is sometimes in large and sometimes in small pieces. Why cannot we put the large pieces of coal on the fire? (Because they are heavy; too large for the grate, etc.) What do you do to these large pieces? (Break them.) How do they break? (Easily.) What do we say of those things that break easily? Class to repeat "Coal is brittle."

II. **Uses.**—(1) Children to be asked where they have seen coal, and for what it is used. (Coal is used for making fires.) The teacher might here ask the class to name the different uses of the coal-fire.

(2.) Refer to the flame with which the coal burns, and ask the children to describe it. Ask them if they know other things that give a bright light like the coal. Tell them that gas is obtained from coal, and let them compare the flame in the fire with the gas-light. The following experiment might here be introduced to show the class that gas is made from coal. A piece of coal should be placed within the bowl of a clay pipe. The bowl should then be covered with clay and placed in the fire, or flame of a spirit-lamp. In a short time smoke and gas would be seen issuing from the stem of the pipe, and on applying a match this would burn with a bright flame. The children should compare this with the gas-light.

The teacher now asks the children what else is burnt on the fire besides coal? (Coke and cinders.) Compare the burning of the coal with the coke, and get the class to describe the difference. The coke has no flame. All the bright yellow flame (the gas) is out of it. Here the coke obtained in the former experiment might be shown, and the children asked what it is. They would thus find out that coke is obtained from the coal. Children living near gasworks would know that coke may always be bought at such places; but at the same time they may not have thought that this was obtained from the coal in making the gas.

Call the attention of the class to the fact that railway engines always carry coal, and ask why. (Large fires, called furnaces, are used to boil the water in the boiler and make the steam.) Now lead them on to notice that many things are made with the help of steam.

In manufacturing districts this will be familiar to the children, but in other districts it would be necessary to show a picture of a furnace, and briefly and simply describe it.

III. **Where found.**—Ask the children where we get coal. It is dug out of the earth in many parts of the world, and very large quantities are found in our own country. Children to give the name of our country Tell the children that deep holes, called pits, are dug in the ground. Show a picture of a pit, and get the children to describe it, and compare its galleries and passages with the streets of the district in which they live. Also show how the men get down the pit, and how the coal is brought up. The manner of breaking the coal, and some of the dangers of getting it might be mentioned, and their sympathy for the underground workers aroused. The men who work in coal-pits are called colliers.

IV. **Summary.**—This should be written on the board as the lesson proceeds, "Coal is black, hard, bright, in-flam-ma-ble, and brit-tle. It is used for making fires, gas, and coke; to heat the water in steam engines; for melting metals.

"Coal is dug out of the earth. Deep holes called pits are made by men called colliers."

CHILDREN'S CLOTHES.

Class—The Babies.

Apparatus: A large doll and the necessary clothes.

Now, little ones, what do you do when you go home from school in the afternoon? (Have our tea.) And after you have had your tea? (Play a little while, and then go to bed.) What do you have to do before you go to bed? (Undress ourselves.) Tell me what you mean by saying you undress yourselves? (We take off all our clothes.) Why do you wear clothes? (To keep us warm.) The class will then repeat, "We wear clothes to keep us warm." But do you not want to be warm at night? (Yes.) Then what keeps you warm then? (Our night-dresses and the bed-clothes.) When you get up again what do you have to do? (Wash and dress ourselves.)

The teacher now, placing the large doll in front of the class, would proceed:—Now see what I have here. Yes, it is a large doll. Let us try to dress it in the same way that you are dressed. What do you first put on? (A shirt.) What colour is it? Yes, it is white. How does it feel? (Nice and soft.) The teacher should now call out one of the children to find Dolly's shirt; when found the child should put it on the doll. In a similar way, each of the following articles of clothing should be found and put on :—

What have you next to your shirt? (Stays.) What have you on your stays? (Buttons.) For what do you use these buttons? (To fasten the drawers to.) Yes; on what part of you do you put your drawers? (On our legs.) And your shirt and stays? (On our bodies.) What do you have over your drawers and stays? (Petticoats.) Yes; some of you have more than one. Now what do you put over your warm petticoats? (Our frocks.) Do you know what else to call your frocks? (Our dresses.) Each of you touch your frock; and, Mary, tell me the colour of yours. (Brown.) Is there any one else who has a brown frock?

The teacher here might ask the children to name the colours of their dresses, thus availing herself of a good opportunity of testing the children on this point.

The class would then repeat, "Our frocks are of different colours." Children often wear something over their frocks. What is it? (Pinafore.) What colour is your pinafore? (White, etc.) What is the use of it? (It keeps our frocks clean.) How often do you want a clean pinafore? (Every day.) Why? (Because it gets dirty.) What does your mother have to do when it is dirty? (Wash it.) The teacher should here show the children the necessity for trying to keep their pinafores as clean as possible, so as to lessen the work of the mother. The class should then repeat, "We wear pinafores to keep our frocks clean."

But you have not told me what you wear on your feet. (Boots or shoes, and stockings or socks.) Yes; very little boys and girls wear socks and shoes, but bigger ones wear stockings and boots. Of what use are your stockings? Yes, they keep your legs and feet warm. What is the use of your boots? (They keep our feet dry.) What else do they do? (Keep our feet from being hurt by the stones, etc.) Of what are your boots made? (Of leather.) What has to be done to them every morning? Why must they be cleaned? Some children are very fond of walking in the puddles and the mud; then they get their boots very dirty, and as well as getting them dirty they spoil them, and wear them out, When do we say your boots are worn out? (When there are holes in them.) If you walk about with boots with holes in them what would happen to your feet? (They would get wet.) Yes; and if your feet get wet you are very likely to catch cold and be ill. What else might happen? (We might cut our feet with the stones.) Yes; and then you would have to stop indoors and perhaps in bed. What does your mother do when your boots begin to wear out? (Sends them to be mended.) The children should then repeat, "Our boots are to keep our feet dry, and also to keep them from being hurt." Sometimes little children have holes in their stockings: this they cannot help. But I have seen little boys and girls, when they have a tiny hole in their stocking, putting their fingers into it. What does this do to the tiny hole? Who has to mend your stockings? Then you must try to remember not to make the small holes into large ones. Now tell me all the clothes we have spoken about. (Frocks, petticoats, drawers, stays, shirts, boots, and stockings.) To make this recapitulation more interesting, the teacher should ask such questions as—How many boots have you? Where do you wear them? How many stockings have you? Of what use are they? How many petticoats? etc.

Now it will very soon be time for you to go home. What do you want before you go? (Our hats, etc.) Why do you put on more clothes to go out in the street? (This room is nice and warm, but the street is cold.) The children to repeat, "We have to wear more clothes in the street than in the room." Where do you put your hat? Yes; to keep your heads warm. What else do you put on? (A jacket over our frocks.) And if it is very cold? (A nice, soft, warm scarf.) Yes; you must put this tight up under your chin to keep your neck warm.

Should this lesson be given in the summer-time, of course the teacher would have to vary it, *e.g.* with regard to the hat, the children should be told to be very careful about playing in the sun without a hat; this now becomes a kind of shield, and is not used to keep them warm.

THE CAT.

CLASS—CHILDREN UNDER SIX.

Apparatus: A picture of a cat, a stuffed specimen; or, better, a live one.

I. **Description.**—The cat to be described by the children from the picture, or specimen. Its head is round, its eyes are large, its body is long and covered with soft, thick fur. It has four legs. Compare this number with their own. What has the cat at the end of its legs? (Feet, called paws.) Now look at pussy's feet; what has she on the under part? (Little dark, soft pads, or cushions.) These enable the cat to walk very quietly, and so you cannot hear her when she comes into the room—not like you, with your thick boots. Look again and see what she has at the end of her toes. (Sharp claws.) What does she do with them? (Scratch.) Does she always scratch when she puts her paws on you? (No.) How is that? You do not know; well, then I must tell you. She is able to draw her claws in, and then she cannot scratch. If you are not kind to her, or hurt her, she is sure to put her claws out and scratch you.

II. **Habits and Food.**—She puts her claws out sometimes when she is not angry. Can you tell me when she does this? (To hold things.) Yes, and to catch her food. What does pussy eat? Where do you see cats? How many of you have a cat at home? Why do you have them in your houses? (To catch mice.) Why does your mother like the cat to catch mice? (Because they eat our food.) Sometimes your mother is cross with pussy. Can you tell me when that is? (When she takes anything from the table or cupboard.) The teacher might here enter upon the cat's liking for birds, and relate a story about a naughty pussy getting up to a cage and killing a pretty little bird. What had to be done to pussy then? How ought she generally to be treated? When she is angry have you noticed her tail? What noise does the cat make? She purrs and mews. Yes, she purrs when she is pleased. When does she mew? (When she is hurt, or wants something.) The class to repeat—"The cat purrs when she is pleased, and mews when she is hurt or wants something." What are young cats called? How does the old cat treat them? How does she feed them? What else does she do? (She washes them.) With what does she do this? (With her tongue.) Yes; if you look at the cat's tongue, you would see it was very rough. Put your finger on your tongue: how does it feel? (Very soft.) Have you seen pussy with a bone? How does she get the meat off? (With her rough tongue.) The class to repeat—"The cat's rough tongue helps her to wash her kittens and to eat her food."

The teacher should then warn the children to be kind and gentle when they are playing with the kitten.

The children might repeat or, later, sing the song about the cat, "I like little pussy, her coat is so warm," etc.

III. **Summary.**—This should consist of such sentences as "The cat's head is round," "Its eyes are large," "Its body is covered with nice soft, warm fur," etc. The sentences previously repeated by the children during the course of the lesson should also form part of the summary.

WATER.

CLASS—CHILDREN OVER SIX.

I. **Qualities.**—Place a glass of water before the class, and ask them to look at it and say what they can about it. They will see that it is *bright*. The teacher should then hold something the other side of the glass, and then the children will notice that they can see through the water. Again, something should be put into a jar of water, and some of the children might be asked to say if they can see it when they look over the top of the jar. What do we say of anything we can see through? We say it is *transparent*. By comparing water with chalk coal, and various other coloured things, the chil-

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dren will discover that it has no colour, *i.e.* it is *colourless.* The teacher should now pour some of the water out of the glass on to a slate, and ask the children what has been done. (The water has been poured out.) How do you know that the water has been poured out? (Because the slate is wet.) The teacher should then put a few drops of water on to a slate, and then tilt the slate so as to make the water run down it, and then ask the children what the water has done. (It has run down the slate.) Do you know what we say of those things which run in this way, or can be poured out? They are called *liquids.* The children should then be asked to name other liquids. Now let a child, or several children, taste the water. What do you notice? (It is *cold.*) What kind of taste has it? You cannot tell. Can any of you tell me what taste sugar has—and salt? Well, we say that water has no taste, *i.e.* it is *tasteless.* Now some of you may smell this water for me. Do you notice any smell? No, water has no *smell.*

II. **Uses.**—The children should be asked, What use have you made of water to-day? (The first use we made of it was to wash ourselves.) Why do you use water? (Because it is a liquid.) Well, vinegar, and coffee, and beer are liquids, why do you not use these? (Because they would make our hands and face smell.) Yes; if you upset beer or coffee on the table-cloth what does it do? (Marks or stains it.) Yes; and it would do the same to your hands and face if you washed in it. Now tell me, then, why water is the best liquid for washing. (Because it has no smell or colour.) Now tell me another use you have made of water to-day. (We had some to drink.) What other things do you drink? Which do you like best? Do you know why we like water to drink, and why we never get tired of it? (Because it is cold and has no taste.)

III. **Sources.**—Lead the children to see that water is most abundant—everybody needs it, and everybody can easily get it. Ask them where they get the water. They will probably say from the tap. Ask how it gets into the tap? (Through the pipes—from the cistern.) Question the class as to what happens in the very cold weather. Where do they

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get water to drink when it is frozen in the house? (From plugs in the street.) Describe the large pipes running under the street full of water, and briefly show them that this water comes from large waterworks, and that there they get the water from the river. Then, by reference to the small filters, the children should be led to see that the water has to be made clean before the men at the waterworks turn it into the large pipes.

For country children this part would be omitted, and the well and pump slightly touched upon instead.

The rain water should be mentioned, and the teacher should point out why their mothers like to have this water for their washing.

IV. **Summary.**—This, of course, should have been written on the board as the lesson proceeded. The children being asked to spell the easy words.

Water is bright, transparent, cold; it is a liquid, tasteless, colourless, and without smell. It is useful for washing ourselves, etc., and for drinking. It is very plentiful, and is found everywhere.

The children should now read and repeat this, and afterwards write it on their slates from memory.

THE SHEEP.

Apparatus:—Picture of a sheep; specimen of wool.

I. **Description.**—The teacher should show the children the picture of the sheep, and ask them the name of the animal, and if they have ever seen one. Where did they see it? Now look at this picture, and try to tell me all about the sheep. To what am I pointing? (The head.) What would you say about the head? (It is small, and pointed towards the nose.) What do you notice about the eyes of the sheep? (They are small and very mild looking.) Yes. Are any of you afraid of sheep? (No.) Why not? (Because they are so quiet and gentle.) The teacher might here refer to the timidity of the sheep. Some sheep have horns on the top of their heads. What are you going to tell me about its ears? (They are small.) Now what can you tell me about the body? (It is long.) With what is it covered? (Soft, warm wool.) How many legs has it? (Four.) How many more than you? Tell me some other animals that have four legs. What has the sheep at the end of its legs? (Feet.) Let the class compare the feet of the sheep with those of the horse, cow, and cat.

II. **Habits and Food.**—The teacher might here mention that sheep live in the fields, eating the grass found there. The attention of the children should be directed to the sheep's habit of lying down to chew the grass they have already taken into their mouths. In country districts where sheep are reared the children would be able to mention other things that the sheep eat. The timidity and gentleness of sheep should be noticed.

III. **Uses.**—The teacher should ask the children where they have seen sheep. Some of them would probably say, "In the street," or, again, "In the fields." What were they doing in the street? (A man was driving them along.) To where was he driving them? (To market.) For what purpose? (To be sold.) To whom? (The butcher.) What does the butcher do with the sheep? (Kills them.) What is the flesh of sheep called? (Mutton.) The class should then repeat, "The flesh of the sheep is called mutton." Now there is another part of the sheep that is used after it is killed. Can you tell me what it is? (Its skin.) The teacher should then tell the children that a strong kind of *paper* is made from it.

What did you tell me the skin of the sheep is covered with? (Wool.) Do you always see sheep with thick wool on them? (No.) How is that? (It is cut off.) Yes; when the weather is warm, men cut it off with very large scissors. Look at this piece of wool; what colour is it? (White.) Yes. Before the men cut the wool off, they wash the sheep. Sometimes, however, the wool is washed after it is cut off. (Picture of sheep-shearing should be shown.)

What use do we make of wool? (It is made up into warm clothes for us all.) This little boy's warm coat is made of wool. His flannel shirt is made of wool. Some of your dresses are made of wool, and also your petticoats. Can you tell me any of your bed-clothes that are made of wool? (Blankets.) What do you use for knitting? Yes, wool; for making socks and stockings and nice scarfs for your necks. Now, besides this, the sheep gives us milk to drink. What milk do you drink? Yes; we do not often drink sheep's milk, but let the little baby sheep have it all. Do you know what these baby sheep are called? (Lambs.)

IV. **Summary.**—This is to consist of such sentences as the following:—The sheep has a small head. Its body is long. It is covered with soft, warm wool. The sheep eats grass. We eat the flesh of sheep. It is called mutton. The wool is made into warm clothes. Young sheep are called lambs.

THE POTATO.

CLASS—CHILDREN OVER SIX.

Apparatus:—A potato; picture of potato plant.

I. **Description.**—(*a*) **Of the potato.**—The children to be shown a potato, and asked to describe it. What colour is it? (Brown.) What do you see on the skin? (Little specks or eyes.) The potato should then be cut, and the children should notice that it is of a very pale yellow colour and is moist. The children should then be told that it is part of a plant. A picture of the plant should then be shown, and the children asked to point to the potato. Which part of the plant is the potato? (The root.) Is it the whole of the root? (No, there are some little threads.) Yes; what are these called? (Fibres.) Do you remember talking about these fibres in the lesson you had on roots? The children should then repeat, "The potato is a part of the root of the plant."

(*b*) **Of the plant.**—Now look at the plant, and tell me the different parts of it. The root we have already talked about. What do you see above the ground, coming from the root? (The stems.) What do you see coming from the stems? (The leaves and flowers.)

II. **How and where obtained.**—Where do we get potatoes? (From the shop.) Yes, but where does the shopman get them? (The man buys them from the gardener.) How does the gardener get them? (He digs them out of the ground.) What does he use for this purpose? (A large strong fork.) How does he know when the potatoes are ready to be dug up? You cannot tell me. Well, he looks at the flowers and stems of the plant, and when they begin to wither or die he knows that the potatoes in the ground are ready to be dug up. What do we do with them? (We eat them.) The other parts of the plant are of no use, so we burn them. What must we do if we want potatoes another year? The planting of potatoes should then be slightly referred to. Sometimes the very small potatoes are put aside and saved for seed. They are planted in rows, large holes being made and a potato placed in each. Instead of the small potatoes being kept for planting, sometimes larger ones are saved. These are cut into pieces, so as to have at least one eye (or bud) in each piece. These pieces are planted in the same manner as the small potatoes. To some children all this information will be quite familiar, and they would perhaps know more about the cultivation of the potato, such as earthing up, weeding, etc. Other children, however, would have to be told most of the above facts.

III. **Uses.**—Now I think you can all tell me what use we make of the potato. We eat it. When? At dinner, with our meat. Yes, and we call it a vegetable. Name other vegetables. Can you tell me anything else your mother does with the potato? Sometimes she makes cakes with them. The baker uses the potato in making bread.

IV. **Summary.**—The potato is the root of a plant. It has a brown skin, which has specks or eyes in it. The inside is of a pale yellow colour. It is used for food.

GLASS.

CLASS—CHILDREN UNDER SIX.

Apparatus: A piece of glass. A few things made of glass.

I. **Qualities.**—The teacher to show the children a piece of glass, and let them discover all they can by looking at it. By comparing it with the floor, or leather, etc., they will see that it looks prettier, that it shines, or, as we say, it is *bright*. Let them name other things that are bright, and then repeat, "Glass is bright." The teacher should then hold a pencil behind a slate and ask, "What am I holding up?" Then on the teacher's doing the same behind a piece of glass, the children will notice that they cannot see through the slate but they can see through the glass. Let them name other things they can see through, and repeat, "We can *see through glass*." Now let a child feel the glass, and he will discover that is *hard*, *smooth*, *cold*. The children should then repeat, "Glass is hard, smooth, and cold." The teacher should now let a piece of glass fall on the table, also a piece of wood, and a piece of leather. What difference do you notice between the glass and the wood when I let them fall? The glass broke, but the wood did not. Can you tell me anything else that will break easily, like the glass? The children should then repeat, "Glass will *easily break*." The teacher should now stretch out a duster and pour some water on it, and ask the children what happened. (The water ran through the duster on to the floor.) Now the teacher should pour some water on to a glass dish, and the children would then notice that the water does not go through. They should then be asked to name other things that will not let water through, and afterwards they should repeat, "Glass *will not let water through*."

II. **Uses.**—Now, children, look round this room and tell me anything you can see that is made of glass. Windows, picture-glasses. Now tell me anything at home you can think of. Bottles, glasses (wine-glasses and tumblers), vases, lamps, etc. It would be as well if the teacher had various articles made of glass to show the children. As each use is given, it should be put into a sentence and repeated by the children, *e.g.* "Glass is used for making windows," "Glass is used for making picture-glasses," "Glass is used for making vases," etc.

The teacher should always pay great attention to the way in which the young children pronounce their words, and should lead them to make complete answers, or at least to give their answers in sentences. Do not think it is too early to begin this, for it will be found much easier to get the children to thus frame their answers now than at a future period, for then they will have a bad habit to unlearn before acquiring a good one. By deferring this, the teacher would thus be only adding to her future difficulties.

III. **How obtained.**—The teacher should point out that glass is not found under the ground, as coal is; nor does it grow, like the potato does; but that it has to be made by mixing things together. The teacher should be careful not to go into the manufacture of glass, as it would be too difficult for such young children; but she might just mention that it is made by fusing sand and lime with other substances.

IV. **The Summary.**—This should be written on the slate as the lesson proceeds, and should consist of the initial letters of the qualities and uses, and at the end of lesson should be repeated by the class.

G...... is b...... We can see t...... it. G...... is h......, s......, and c...... G...... is used for w..... , g......, v........ l......, b......, etc.

MILK.

Class—Children over Six.

Apparatus: Glass of milk, glass of water, and, if convenient, a glass tube to show the cream and milk.

I. **Qualities.**—The teacher should place the glass of milk and glass of water in front of the children, and ask them to name each. How do you know that this is milk? By its being *white*. What is the colour of the water? It has no colour. There is another way by which we can tell it from water. The teacher then placing a piece of pencil behind the glass of water, and of milk, would get from the children that they can see through the water but cannot see through the milk. What do we say of those things which we cannot see through? They are *opaque*. Tell me some other things that are opaque? The children should then repeat, "Milk is white; it is opaque."

Now taste this milk. Do you like it? Why? It has a nice, sweet taste. Does it taste like the water? No, the water has no taste, but the milk has a *sweet, soft taste*. We have now mentioned in what ways milk and water are unlike. Can you tell me in what ways they are alike? Come, look at me; what am I doing? Pouring some milk on the slate. What does it do to the slate? It makes it wet. What do we say of those things that pour out like the milk, and make other things wet? They are liquids. Name other liquids. The children should then repeat, "Milk is a *liquid*, as well as water." Now, what do we do with the milk? Drink it. To whom do we give a great deal of milk? To young children and babies. Do you know why we give it to them? It is good for them. It makes them grow strong. We say it nourishes them, and therefore we say, "Milk is *nourishing*." Now tell me all you have learnt about milk. "It is a white, opaque liquid; it has a nice, soft, sweet taste, and it is very nourishing."

II. **Uses.**—You have told me one use of milk—that we drink it, and that it is very good for babies. Now, can you tell me any other use of milk? We make it into puddings and sometimes into cakes. Yes, and some people make porridge with it. Do you know what porridge is? The teacher might here question the children on the kinds of puddings made with milk, and explain porridge, etc.

Milk is sometimes made into curds and whey. Have you ever had any? What is it like? Where do you get it? Now, milk is made into other things besides these. If you leave some milk in a jug or basin and then look at it in the morning, what do you notice about it? The top is thick. When this is taken off what do you notice underneath? Milk. Yes, but very thin-looking milk. The teacher should then show the tube containing the milk to the children, and lead them to notice the change that has taken place in the milk; at first it all looked the same, but now? The top part is very thick, while the bottom part can nearly be seen through. Do you know what we call the thick part at the top? Yes, it is cream. Have any of you tasted cream? Do you like it? Could you drink much of it? Why not? It is a good thing you do not want to drink it, for it is very dear. You can get a little by letting the milk stand, but you cannot get much. When your mother only wants to pay a little for milk what kind does she ask for? "Skim" milk. Do you know why it is cheaper? No. Well, it is because the milkman has taken the cream away, and then what is left is not such good milk. When the milkman wants to get the cream he pours the milk into large shallow or flat pans, and lets it stand for some time. Then the cream all comes to the top, and so he skims it off. What do you think he does with this cream? You do not know. He makes it into *butter*. You all know what butter is, and for what we use it. Now you can tell me from what it is made.

Now, there is something else which we eat that is made from milk, but I suppose you cannot tell me what it is. Well, it is *cheese*. Now, how many of you have tasted cheese? I daresay you all would like to know how butter and cheese are made from the milk, but that I must tell you another day.

III. **From whence obtained.**—Where do we get milk? From the cow. Do you know any other animals that give us milk? The ass and the goat. Yes, but we do not use much of it; the milk of the ass is very dear, and is only used for people who are not strong enough to drink cow's milk. What other animal gives us milk? Yes, the sheep; but in this country, as I told you the other day, we do not drink it. Who does drink it? The little lambs.

IV. **Summary.**—This should be written on the slate as the lesson proceeds, and should consist of the following:—
Milk is a white, opaque liquid. It has a nice, soft, sweet taste. It is very nourishing.

Milk is used for food. It is made into butter and cheese.

IRON.

CLASS—ELDER INFANTS.

Apparatus:—A piece of iron and iron wire.

I. **Introduction.**—The teacher might point to various things made of iron, and ask the children of what they are made. The children should then be asked to name other things made of iron.

II. **Qualities.**—I have in my hand a piece of iron, and I want you tell me all you can about it. Can you tell me what colour it is? It is of a *dark colour*. The teacher then passing the piece of iron to the children would ask, How does it feel to you? *Hard*. Yes. What else did you notice? You cannot say? Well, then take this piece of wood in one hand and the iron in the other. Now, which is the larger? The wood. Quite right, but what do you notice about the iron? It is heavier than the wood. The children should then repeat, "Iron is *heavy*."

The children should then be asked to look again at the piece of iron, and to think of the various things made of this metal. How are they made? Could you make anything with this? Do you know what has to be done to it? It is melted. Would the iron melt in your fire at home? No. What would happen to it? It would get red hot. The teacher should then explain that iron soon gets hot, but in order to melt it the iron must be placed in a very large hot fire. What are these very large fires called? Furnaces. Children to repeat "Iron is melted in large fires called furnaces." What do we say of iron because it will melt in the fire? It is *fusible*. The teacher should then explain that saucepans, etc., are made of the iron when it is in this state, and also that when things are thus made the iron is *brittle*, and hence children must be careful not to drop saucepans, etc., or they will crack.

Some iron wire should now be shown to the children, and they should be asked what we say of those things that can be drawn into wire. We say they are *ductile*. Can you tell me other things that are ductile? The children should then repeat, "Iron is made into wire, and therefore we say it is ductile."

Perhaps some of you have seen the blacksmith at work. What does he do to the hot iron? He hammers it. Why does he do this? To make it into something. Do you know other things besides iron that can be hammered out? Gold, silver, copper, etc. Because we can hammer out these things they are said to be *malleable*. The children should then repeat, "Iron is malleable."

III. **Uses.**—The children should be asked to name all the things they know that are made of iron. The teacher should arrange these in groups, *e.g.* domestic—machinery—building—steel; and at the same time show the children how extensively it is used.

IV. **Where found.**—The teacher briefly to explain that iron is found in the ground and has to be dug out by men called miners. In mining districts this section should be enlarged upon.

V. **Summary.**—This should be made as the lesson proceeds, and should appear thus:—"Iron is hard, heavy, fusible, brittle (when cast), and malleable. It is very useful, and is made into saucepans, kettles, grates, etc. It is dug out of the earth." The children afterwards should write these sentences on their slates from memory.

TURNIP AND CARROT.

CLASS—CHILDREN UNDER SIX.

Apparatus:—A turnip, a carrot, and a parsnip. A picture of these plants

I. **Description.**—The teacher should show a turnip and carrot to the children, and ask them to name each. Well, first we will talk about the turnip. Now look at this, and tell me what shape it is. It is *round*. And what colour is it? It is white. The turnip should then be handed to some of the children, and the teacher should ask, How does the outside feel? It is *smooth* and *hard*. The children should then repeat, "The turnip is white and smooth." The teacher should then cut the turnip in half, and call the attention of the class to the line between the peel and the inside of the turnip. What do we call the outside of the turnip? The skin or peel. When your mother is going to cook the turnip, what does she do? She cuts off the peel. Yes, and if you look carefully, you will see that she always cuts the peel off as far as the line you just spoke about. The teacher might here compare the peeling of the potato (which should be as thin as possible, so as not to waste) with the thick peeling of the turnip. But you did not tell me how the inside of the turnip looked. White and moist.

Now, children, look at this carrot. What difference do you notice? It is of a *red* colour. What else? It is *round* and *long*. Yes, and what about the ends? One end is thicker than the other. Do you know what we say of those things that are thicker at one end than the other? We say that they taper. All of you repeat, "Things that gradually get smaller from one end to the other are said to be *tapering*. Feel the carrot and you will notice that it is *hard* and *moist*. Now, what does your mother do when she is getting the carrot ready for the saucepan? She scrapes it. What did you say she did to the turnip? She peeled it. Why does she not do the same to both? Because the turnip has a thick peel and the carrot a very thin one. The teacher should point out that it would be wasteful to peel the carrot. Now let us cut the carrot in half. Is it like the turnip? No. What is the difference? The turnip was white, but this is red and yellow. What part is red? The outside part. And which yellow? The middle or inside ring. The teacher should then ask for the name of a vegetable very much like the carrot, viz. the parsnip, and after showing it to the class ask the children to say where it resembles the carrot. (In shape.) Yes, what about the colour? It is different from the carrot. Then on cutting it the teacher might point out that the parsnip is divided into two parts like the carrot, but that these parts are not so well marked by change of colour.

A picture of the turnip and carrot should next be shown to the children, who should then be asked to point out which part of the turnip we eat. The other parts of the plant should then be named.

Now look at this picture. What do you see? A carrot. Where is the carrot? Which part of the plant is it? The carrot is the root of the plant. Now look at the stem and leaves of the carrot, and compare them with those of the turnip. Of which of these plants do we sometimes eat the leaves? The turnip. What do we call the leaves of the turnip? Turnip-tops.

II. **Uses.**—For what do we use the turnip and carrot? To eat for our dinner. What do we call the plants we eat? Vegetables. Can you name any other vegetables?

III. **Summary.**—The children should repeat the following sentences:—"The turnip is white, round, and smooth; it has a thick skin. The carrot is red, long, and tapering; it has a thin skin. They are used for food."

THE KITCHEN.

Class—The Babies.

Apparatus—A doll's house, model of a kitchen, and kitchen utensils.

Now, little ones, what have we here? A doll's house. To which part of the house am I pointing? Yes, this is the kitchen, and it is this part we are going to talk about to-day. Have you ever been in a real kitchen? Where? At home. Well, then, look at this kitchen, and see if it is anything like yours at home. What is this in the middle of the room? A nice large table. Of what is it made? Wood. Why do we want a large table in the kitchen? To work on. Can you tell me some of the work done on this table? Mother makes puddings, gets the vegetables ready for cooking, irons the clothes, etc. What is this against the wall? The dresser. Of what is it made? What do we put on it? Plates and dishes. On which part of the dresser do we put the plates and dishes? On the shelves. Let us count the shelves. How many are there? What do you see on the front edge of the shelves? Hooks. And what do we hang on these hooks? Cups and jugs. Why do we not hang up the saucers and plates? Now look at the bottom of the dresser—do you not see a very wide shelf? Tell me what we put on it? Scales, vegetable-dishes, basins, etc. Now below this very wide shelf you can see some handles. To what do they belong? To the drawers. For what does your mother use these drawers? Come here, Mary, and open the first drawer. Now what do you see inside? Dusters, tea-cloths, etc. Yes; for what are the tea-cloths used? To wipe the cups and saucers, plates and dishes, etc., when they have been washed. Now, George, what do you see in the next drawer? Paper, string, etc. Yes, it is very nice to have a drawer for these things, since it helps to keep the kitchen tidy, and you know where to find them when you want them. Who can tell me what is under the drawers? Yes, we call this the potboard. For what is it used? It is used to keep the saucepans, etc., on. What colour is this shelf? Black. Why is it not the same colour as the other parts of the dresser? Because the black saucepans, etc., would mark it, and then it would always look dirty, and this would then make the kitchen look untidy. Now tell me all the parts of the dresser you have noticed. The shelves, the hooks, the drawers, and the potboard. The children should now repeat:—"The shelves are for the plates and dishes; the hooks for the cups and jugs; the drawers for the dusters, tea-cloths, paper, string; the potboard for the saucepans."

I want a little girl to come here and put the plates on the dresser for me. Which shall she put on first? The large ones. Well, I think it would be better to pack all the large ones together, then the next size, and then the next, so that they are all in different sets. Now you have only to take one set of plates and put them on the shelf, and you cannot make a mistake and put a small one with a large one. How must we put the plates? They must stand up and lean against the wall. What do you see on the shelves to keep the plates from slipping off? A little ledge. Yes, and you must always be careful and put the plates inside this ledge, or they will fall and break. Now this little boy is going to put the saucepans away for me. Where will you put them? On the potboard. Yes, and you must put them right back against the wall, and take care that the handles do not come outside, or some one might fall over them.

See, here are our jugs—where shall we put them? On the hooks. Yes, and if you look carefully you will notice that there are some large hooks on the top shelf—here you must hang the jugs. What shall we put on the small hooks? The cups. The teacher should then see that all the jugs and cups hang the same way, and call the attention of the children to the untidy appearance of the dresser when the jugs and cups are hanging different ways. Now, what have we in the kitchen besides the table and dresser? Chairs. Of what are they made? The teacher might show why they are not of cane, etc. Then there is the nice large fire. Why do we want such a large fire in the kitchen? To cook our food.

out that they must be cleaned nearly every day to keep them bright. Again, the teacher should talk about iron changing under the influence of wet or damp weather, and in this way the children would be led to discover that "Gold does not *rust*." This sentence should then be repeated by them.

Do you remember the thin sheets of gold the men used in making or gilding the letters? We call these thin sheets of gold "gold leaf," and the men who make them are called gold-beaters. Do you know how the gold is made into these thin sheets? It is beaten out. What do we say of gold because it can be beaten out? It is *malleable*. Name other things that are malleable, and repeat, "Gold is malleable."

The teacher should now hold up a piece of gold wire, or show the children the wires of her ear-rings, and then ask them—What do we say of gold because it can be drawn out into wire? It is *ductile*. Name other things that are ductile. The children should then repeat, "Gold is ductile."

The teacher should now show the children that gold is *heavy*, by comparing the weight of a sovereign with that of a shilling, a penny, a piece of iron, etc. The children should then repeat, "Gold is heavy; it is heavier than silver, copper, iron, tin."

The children should then be told that gold can be melted, and they should be asked what is said of those things that can be melted; after naming other things that can be melted, they should repeat, "Gold is *fusible*."

III. **Where found.**—It would not be advisable to enter very fully into this section. The children should be briefly told that gold is not found in many places; that it is scarce, or rare, hence called one of the precious metals; sometimes it is found in rivers, mixed with sand; sometimes it is found in lumps, which are called nuggets. The nuggets are dug out of the earth by men who are called gold-diggers.

IV. **Summary.**—This should be written on the slate as the lesson proceeds, and afterwards copied by the children. If time will allow, it should be written from memory:—"Gold is used for making coins, jewellery, and for gilding; gold is very valuable; it has a yellow colour; it does not rust; it is malleable, ductile, fusible, and heavy; gold is sometimes found in rivers, and sometimes dug out of the earth."

THE DOG.

Class—Children under Six.

I. **Description.**—Several pictures of dogs to be shown to the children, so as to place before them most of the different kinds. The teacher, after asking the name of all these animals, should ask if they are all alike. Tell me what difference there is? Some are large and some small. The children should then repeat, "Dogs are of different sizes." With what are dogs covered? Hair. Now, what kind of hair has this dog? Curly. And this one? Very short and straight. And this one? Long and straight. What can we say about the hair of dogs? It is of different kinds. The children should then repeat, "Some dogs have curly hair, some straight hair; some have very short hair, and some very long hair." What is the colour of this dog? And of this? And this? What shall we say about the colour of dogs? Dogs are of different colours. Now look at the heads of these dogs. Are they all alike? What would you say of this one? It is long and pointed. And this one? It is nearly round. The ears of dogs should next be noticed and described. The children would learn that some dogs have short, erect ears; some have long, erect ears; while others have ears that are long and hang down, or lop.

Now you have told me many things in which dogs are different, can you not tell me anything in which dogs are alike? They have four legs. The toes have claws. The teacher should compare the claws of the dog with those of the cat. The cat's are strong, sharp, and able to be drawn in at pleasure; whereas the dog's are strong, blunt, and cannot be drawn in.

Uses.—The children should be asked, How many of you have a dog at home? Why do you keep a dog? Because it takes care of the house. How does it do this? It barks when any one comes. What do you do then? Go and see who is there. What would the dog do if you did not go? Perhaps it would bite whoever was there. Would it bark if you or your parents came to the house? Why not? The children should then repeat, "Dogs are used to guard houses." The teacher might here point out the wisdom of the dog in being able to discriminate between friends and strangers.

Can you tell me any other way in which the dog is useful? Yes; he is used for minding sheep. The teacher should then explain that a certain kind of dog, called the sheep dog, is used for this purpose. The children might be told how kind the shepherd is to his dog, how he treats him like a friend; also that the dog does not hurt the sheep, that the sheep trust the dog, and follow him, and are pleased to have him with them. The children should also be told that in some countries the dog has to guard the sheep from wild animals—such as wolves.

Do you know any other use of dogs? Yes; sometimes they catch rats. The teacher should here inform the children that dogs are also used for catching rabbits, etc., and also for hunting foxes and stags. These dogs are called hounds.

The teacher might then proceed as follows:—I will now tell you about a very useful and noble dog. In some countries where there are very high mountains, and a great deal of snow lies on them, these large dogs are kept to look after people who have lost their way in the snow, and who would die if these good dogs did not find them and help them out of the snow.

The children should then be told that some dogs are very fond of the water, and the teacher might relate a tale of a child being saved from drowning by a dog.

In conclusion, the teacher should impress upon the children that they ought to love the noble dog and treat him very kindly, because he is so useful, brave, and kind.

GLUE.

CLASS—CHILDREN OVER SIX.

Apparatus—Pieces of glue, glass, wood, size; glue pot, spirit lamp.

I. **Qualities.**—The teacher, showing the children some glue, should ask them to describe it. By looking at it they will notice that it is *brown*; by feeling it they will discover that it is *hard*. What happens when I strike this piece of glue and this piece of wood? The glue breaks but the wood does not. What do you say of those things that are hard and yet easily broken? We say they are *brittle*. The children should then repeat, "Glue is hard and brittle."

The children should now be directed to compare the glue with a piece of glass and a piece of wood. If these things be held up to the light they will discover that they can see through the glass, partly see through the glue, but cannot see through the wood. What do we say of glass because we can see through it? "Glass is transparent." And what of the wood? Wood is not transparent, it is opaque. Well then, as we can partly see through glue we say it is half-transparent, or, as you ought to say "semi" instead of "half," we say "Glue is *semi-transparent*." The children should then repeat this sentence. The teacher proceeding would ask, Have you seen anyone using glue? Who was it? For what was he using it? He was sticking some pieces of wood together, What must we do with this piece of glue before we can fasten these pieces of wood together? We must melt it. How shall we do this? Put it into the glue-pot and then put the glue-pot on the fire. Yes, but before that we must be careful to put water in the bottom of the glue-pot, or the pot would crack and the glue would not melt. The teacher might illustrate this by holding a piece of glue in the flame of the spirit lamp. The glue would then burn and shrivel up instead of melting. We must also put some water in with the glue, or it would be much too thick. When the water gets very hot then the glue begins to melt. What do we say of those things that melt in hot water? We say, they are soluble. Can you name other things that are soluble? Yes, sugar and soda. The children should then repeat, "Glue is *soluble*." The teacher should now put a little glue on her finger, and then pinch her thumb and finger together. Calling the attention of the children to the way her finger and thumb open, she should ask what they say of the glue. It is *sticky*. The children should then repeat, "Glue is sticky or adhesive."

II. **Uses.**—Now for what did you say we used this glue? For sticking wood together. Well, I think you meant to say, for joining or fastening wood together. Can you tell me anything else that is used for fastening things together? Sealing-wax, gum, paste, and wafers. What are these used to join? Why do we not use them for wood? Because they are not strong enough. Do men always use glue when they want to fasten wood together? What else do they use? Nails and screws. The teacher should then explain that glue is used when nails or screws cannot be used. The wood may be too thin to allow of the use of these, or the join may be in such a position that no nail or screw could reach the two pieces to be fastened.

The teacher should then show the children a piece of size, and tell them that it is a kind of glue—in fact, glue is always in this state before it is made hard. Have you ever seen your father use size? For what did he use it? The teacher would probably have to tell the children that it is mixed with whiting to make the whitewash stick better to the ceiling, &c., and also with the colour on the walls to prevent its coming off when we rub against them. Walls are sized before they are papered.

III. **Of what made.**—Glue is made from the hoofs of animals, from skins and cuttings, and old gloves, &c. These are first well washed and then put into a boiler and boiled to a jelly. This jelly is called size. The size is then cut into cakes and put on nets which are stretched out, and the sun and air dry these cakes of size into hard glue. Sometimes the size is dried in ovens, but this does not make such good glue.

IV. **Summary.**—This should be written on the blackboard during the progress of the lesson, and afterwards copied by the children or written from memory. "Glue is of a brown colour; it is hard and brittle; it is semi-transparent, soluble, and sticky or adhesive. It is used for joining wood. It is made of hoofs and skins of animals. Before glue is made hard it is called size."

THE GOAT.

Class—Children under Six.

Apparatus—A picture of a goat.

Look at the head of this goat and tell me the shape of it? It is long and pointed. What can you say about the ears? They are long, and lie back. Can you tell me of what use this is? It enables the goat, even when it is running quickly, to hear anyone coming behind. What has the goat on its head? Horns. How many horns has the goat? It has two. Yes, and they are rather long. You must be careful and not tease or worry the goat, for it is very fond of using its horns, and if it knocked you with them it would hurt you. With what is its body covered? With thick, fine hair. What are you going to tell me about the hair on a goat's chin? It is very long. What name do you give to it? We say it is a beard. What kind of a neck has the goat? It has rather a long neck. And its tail? This is very short indeed. What do you say about its legs? It has four legs, and they seem very strong and made for fast running. What kind of a hoof has the goat? Its hoof is divided into two parts. Is this like the cow or the horse? What kind of a hoof has the horse?

II. **Habits and Food.**—The children should be told that the goat is found in nearly all parts of the world. It runs very swiftly, and can climb very high and steep mountains without slipping. It often stands quite at the edge of the rocks, eating the grass that may be there. When in any way annoyed or interfered with it uses its horns to protect itself.

III. **Uses.**—The children should be asked if they know of any use we make of goats. Sometimes you see them drawing very little carts, in which babies and little children ride. Some of you may have one at home. What use do you make of it? It gives us milk. Yes, goats' milk is very good indeed, especially for people who are ill. Can you tell me the name of any animal that is something like the goat? The sheep. Of what great use is the sheep? It is used for food. What do you call the flesh of the sheep? Mutton. The flesh of the goat is eaten by some people, but it is not as good as mutton. Do you know any other part of the goat that is useful? Well, I will tell you. The skin of the goat is more useful than any other part. It is made into leather called morocco. Perhaps some of you may have heard of morocco leather. It is used for the covers of nice books. It is too dear for our school books. Perhaps some of you have a Bible covered with this nice leather. It is also used to cover pretty boxes. Sometimes chairs and sofas are covered with this leather. It is very pretty, very soft, and also very strong. The children should then repeat, "The skin of the goat is made into very nice leather called morocco."

There is a great deal of fat called tallow obtained from this animal. For what do we use tallow? It is made into candles. Some goats have very long silky hair. This hair is used to make shawls, and if you ask your mother she would tell you that these shawls are very nice indeed. They are called Cashmere shawls. The people who live in France have learned to keep the Cashmere goat in their country, and they make the hair into stuff for dresses. This stuff is called Cashmere.

IV. **Summary.**—This should consist of a few short words, and be repeated several times.

The g—— has a l—— and p—— head. Its ears are l—— and ———. It has two l—— horns. It has f—— s—— legs. Its s—— is made into l——.

THE DINNER TABLE.

CLASS—THE BABIES.

Apparatus—The things necessary for "setting" the table for dinner

To-day I want you to help me get the table ready for dinner. Do you know what we say when we want the table made ready for dinner? Yes, we say, ' Lay the cloth," or " Set the dinner-table." Now, this is the table that we are going to get ready. What is the first thing we must put on it? The table-cloth. But before we can put it on what must we take off the table? The table-cover. What must we do with it? Take it off, fold it very neatly, and put it away. Now we can put our table-cloth on. How shall we lay it? Quite straight and smooth, taking care that there is the same length hanging down all round. How does the table-cloth look? What, makes it look nice? It is clean and white. The children should then repeat, " The table-cloth is clean and white, and we must try and not make it dirty." Now what do you put on the table-cloth? The cruet-stand. Who can come and find me the cruet? What is there in it? Pepper, mustard, vinegar, and sometimes other things. What do you do with the pepper, mustard, and vinegar? Eat them with our dinner. Who uses them? Yes, only your father and mother. Do you know why your mother does not give you any? They taste hot, and you would not like them. I expect they would make you cough if you happened to get any in your mouth. Where shall we put the cruet-stand? Well, Tommy, you come and put it in its proper place. Now what else do we want? Salt. In what is the salt? A salt-cellar. What colour is the salt? Of what is the salt-cellar made? What do we have to take the salt out of the salt-cellar? A salt spoon. Where do we put the salt? On the side of our plates. Yes, but your mother does not let you help yourself to salt; what does she do? She puts a little all over our dinner. We all eat a little salt with our dinner, as it makes it taste nice, and is good for us. Where do we put the salt-cellar? No; not in the middle. What have we in the middle? Who can come and put this salt in its right place? Yes; we have it at the corner of the table. Sometimes we have two salt-cellars—one in one corner, and one in another. Now I will have someone to put these salt-cellars on the table for me.

Tell me something else that we want? Knives and forks. You come and put the knives and forks on the table. That is quite right, one knife and one fork just a little way apart, then another one for mother, and another one for father. But take care; you have not put your father's right. Can you tell which way it ought to go? Yes, the knife ought to be the other side, because we always hold the knife in the hand on that side. Do you know what we call the hand on that side? The right hand. And in which hand do we hold the fork? In our left hand. Now put your father's quite right, and then all repeat, "We hold our knife in our right hand, and our fork in our left hand." For what do we use our knife? To cut our dinner, and our fork to hold it, and afterwards to put it into our mouth. I do not think many of you can cut your own meat. Who cuts it for you? Mother. There is one little boy who says he can cut his own dinner; you see he is getting quite big. He must be very careful when he cuts his dinner, or he might cut his finger, and then that would hurt him.

Now in father's place we have another knife and fork. What kind is this? A very large one. Do you know the name of it? A carving knife and fork. You must be very careful how you take hold of this knife, for it is very sharp. Which part will you take hold of? The handle. Now look at the fork. Is it like the other forks? How is it different? It is large, and has only two parts—prongs we call them. Then it has this funny piece at the top. See what we can do with it. We can pull it up. When does your father pull it up? When he is going to cut the meat. Do you know of what use it is? Yes, if the carving-knife should slip, it would strike against this instead of your father's hand. What are these? Large spoons. What do we call them? Table-spoons. For what are they used? Who can come and put them on the table for me? No, we do not put them round the table, but we generally put them at the corners by the salt-cellars. There is still something to put on the table. Do you know what you want after you have been eating? You want to drink some water. Well, then, what else must we have on the table? A jug of water and some glasses or mugs. Your father and mother will want a glass each. How many glasses will that be? What will you put for yourself? My nice mug. Yes, sometimes little children are not careful enough, and then they drop their mugs. These are strong, and hence do not break so easily, but if they had glasses, I am afraid the glasses would break if they were dropped. Now I think all the things are on the table. Can you tell me the names of all these things? Cloth, cruet, salt, knives, forks, carving knife and fork, table-spoons, jug, glasses, and mugs. Now we are ready. What shall we want to put our dinner on? Plates. How many plates do we want? Well, you had better put three; one for your father, one for your mother, and one for yourself. Where are you going to put them? In father's place. If you are going to have a hot dinner, what does your mother do to the plates? She makes them hot. Do you know why she does this? To keep the dinner hot. When you are sitting at the table what does mother bring in and put on the table? Meat, in a large dish. What else? Potatoes, and sometimes cabbage. In what kind of a dish are they? In a vegetable dish. This has a cover. Can you tell me why it has a cover? To keep the vegetables hot. Yes, they soon get cold, and then they do not taste so nice. You should be very careful in "setting the dinner-table" not to forget anything, for it is not good to have to leave the table when you have once sat down. I think you have forgotten something. What do you put on to keep your pinafore clean? Yes, a bib. Does your mother or father have a bib? Why not? Because they do not spill their dinner on their clothes.

COINS.

CLASS—ELDER INFANTS.

Apparatus—Sovereign, half sovereign, half-crown, florin, shilling, sixpence, threepenny-piece, penny, halfpenny, and farthing.

I. **Name.**—These coins should be shown to the children, and they should be asked to give the name of each. If any of these coins be unknown to the children, the teacher should mention the name or names, and then exercise the children in picking out or naming the coins. When the names are familiar the children should be asked if they know one name for all of them. Probably the children will say they are called money, and the teacher will then inform them that they are called *coins*.

II. **Of what made.**—The children should then, under the teacher's guidance, arrange the coins according to the metal of which they are made, *i.e.* in heaps of gold, silver, and bronze. The teacher should here explain that the fact of the pence being so frequently called "coppers" arises from their having been previously made of that metal, but that now they are made of bronze, which is a mixture of copper, tin, and zinc. The children should now be asked to name all the gold coins, the silver coins, and the bronze ones, and then they should repeat, "Coins are made of gold, silver, and bronze."

The children should now have their attention called to the value, size, and weight of these coins, and comparisons should be made, *e.g.* the sovereign is smaller than the shilling or halfpenny, but at the same time heavier, and of much more value. We can buy more things with the sovereign than with the shilling or halfpenny.

III. **Description.**—Now, children, look at all the coins and tell me in what they are all alike? They are all *round*. The teacher might here, with advantage, show the children that the coins are not round like a ball or a pencil, but that they are round like a ring or hoop.

What else can you tell me about their shape? They are *flat*. And what next? They have an *edge*. Now look at the edge of the sovereign, the shilling, and the penny, and tell me what you notice. The edge of the sovereign and the shilling is marked with little ridges, but the edge of the penny is not marked: it is smooth. Now tell me which coins are marked. The gold and silver coins are marked, but the bronze ones are not. Yes, but I have a silver coin here which is not thus marked. Can you tell me the name of it? The threepenny-piece.

Now look at the flat sides or faces, as we call them. How many faces has a coin? Two. Yes, and if you look carefully at each one of these coins you will notice the same thing on them all. Can you tell me what this is? Yes, it is a *head*. Whose head is it? It is the Queen's. The children should then repeat, "Every coin has the Queen's head upon it." Explain how it is that some coins have other heads on them. What else do you notice on each coin? Some *letters*. These letters tell us the name of the Queen. Do you know the name of the Queen? Yes, Victoria. If you turn the coins over, you will notice some more letters. These letters tell us the name of the coin. The teacher might here ask some of the children to read the name on the penny, shilling, &c. At the same time their attention should be directed to the other things on this side, *e.g.* the *figure of Britannia* on the penny and halfpenny, the *wreath* on the shilling and sixpence. Then, besides all this, there is a *number* on the coins. This number tells us when the coin was made. The Jubilee coins should be shown, described, and compared with the others. The reason for the change should be explained.

IV. **Uses.**—The teacher should now ask the children for what coins are used. To buy things. Yes, if we want to get some bread, butter, or other things, we must go to a shop to buy them, that is, we must give the shopman some money in exchange for them. Now, which is the easier to carry, the money or the things you buy? The money. Yes, sometimes your mother goes out with money in her purse, but when she has bought what she wants she is obliged to get someone to help her carry the things home. Did anyone help her carry the money? You see then how useful it is to have the coins. Before coins were made people had to carry heavy things about even to buy other things, and this was very troublesome. At last people thought of making coins, to save the trouble of carrying so much about. Now which of these coins would you like best? The sovereign. Why? Because the sovereign is worth more than any of the others. In this way the children might arrange the coins according to their value, and then say their names in the order as arranged.

V. **Summary.**—This should be written on the board as the lesson proceeds, and should consist of the following sentences:—

All pieces of money are called coins.

Some coins are made of gold, some of silver, and some of bronze.

Each coin has the Queen's head upon it.

Each coin has its name upon it.

Each coin has the year when it was made upon it.

Coins are very useful; they are easy to carry.

THE ELEPHANT.

CLASS—ELDER INFANTS.

Apparatus—Pictures of the elephant, and comparative sizes of animals. Specimens of ivory, or things made of ivory.

I. **Description.**—Look at this picture, and tell me what you can about it. What animal is it? The elephant. What would you say about its size? It is very large. The teacher should, if possible, show the children the picture of the comparative sizes of animals. It will give them a clear and lasting idea of the size of this animal. What kind of a head has it? A very large one. What about its eyes? They are very small. And its ears? They are very large and hang down. What are you going to say about its nose? Yes, the elephant's nose is very strange. It is extremely long. What name do you give to it? The trunk. If you look carefully at the end of the trunk, you will notice something that looks very much like a finger. What does the elephant do with this? He picks up things off the ground with it, and if he wants to eat them, he puts them into his mouth. The teacher should then let the children compare the way the horse, cow, dog, &c., get their food. They put their mouths to the ground; the elephant cannot do this, but uses his trunk to put the food into his mouth. Can you tell me why the elephant does not put his mouth to the ground? He cannot, because he has such a short neck. And why has he a short neck? Because his head is so heavy. What makes up for his short neck? His long trunk. What else has the elephant on his head? Two long pointed pieces of ivory. These are called tusks.

Now look at the body of the elephant. What can you tell me about it? It is very large and clumsy-looking; it is covered with a very thick skin. Now look at the legs. They are very thick and strong-looking. Why does the elephant need such thick, strong legs? To support its very heavy body. Its feet are very soft, so that although it is such a large animal, you do not hear it walk.

II. **Habits and Food.**—The children to be told that the elephant lives in very hot countries, and is of great use to the people who live there. It carries heavy loads, and people, on its back. In time of war it is made to carry large guns or cannon, and many soldiers ride on one elephant. What animal do we use for these purposes? The children should also be told that the elephant is very fond of bathing. Why do you think it likes this? It makes him cool. It is often found near water. It lives on vegetables and small branches of trees, which it breaks off with its trunk. When the elephant wants to drink, it first takes the water into its trunk and then puts it into its mouth. To show the children the power the elephant has of holding a quantity of water in its trunk, the following story might be related to them—the fate of the tailor who used to feed an elephant, but who one day pricked its trunk instead of giving it some fruit. The elephant is very quiet and wise. The foregoing story might be referred to in speaking of the wisdom of the elephant, and, if time will allow, other tales might be told.

The teacher should ask the children—Have you ever seen an elephant? Where did you see it? In the Zoological Gardens. What did you see the people give it to eat? Cakes, fruits, nuts, &c. Of what did you say the tusks of the elephant are made? Of ivory. Do you know for what ivory is used? For making handles of knives, brushes, ornaments, &c.

III. **Summary.**—This to be written on the board as the lesson proceeds. The elephant is a very large animal. Its head is very large. It eyes are very small and ears very large. Its trunk is very long. It has a short neck and two long tusks. Its body is very large and covered with very thick skin. Its legs are very thick and strong. The elephant lives in hot countries. It carries heavy loads. It lives on vegetables and small branches of trees.

THE CABBAGE.

Apparatus—A picture of the plant, and, where possible, a specimen of each kind mentioned in the lesson.

The teacher will find that in giving a lesson on this plant, it will be necessary to take each kind separately for the description. It would be impossible to include such different varieties as brussels-sprouts, broccoli, cauliflower, savoy, summer cabbage, &c., in one general description. To do so would not only be a waste of time, but cause a needless confusion in the child's mind with regard to this plant. In country districts, of course, the children would be able to distinguish one kind from the other and be able to describe each. To London children, however, the distinct varieties and the name of each will, in nearly all cases, be included under the one name of "greens" or "cabbage"; hence the teacher, to be successful, will really find it necessary to treat each one separately.

I. **Description.**—The teacher, taking a cabbage in her hand, should ask the children to describe it. It has very large leaves. It is of a green colour, some leaves being lighter than others. The teacher should then pull off the leaves so as to let the children notice how closely they are packed, and at the same time observe the gradual change in colour of the leaves from green to almost white. This white part we call the heart of the cabbage. The teacher should now ask—What other vegetables have we talked about? The potato, the turnip, and the carrot. What part of the plant were these? The root. Now look at this picture. Which part of the cabbage plant do we eat? The leaves.

There is another kind of cabbage very much like this, with a large round head. This is called the savoy, and it comes in the winter when the other cannot be obtained. Let us pull off the leaves in the same way that we did those of the cabbage. What do you notice? The leaves fit even closer than those of the cabbage. Yes, but what do you notice about the leaves? They are very curly or crinkled. What were the cabbage leaves like? They were smooth and not crinkled.

Now look at this plant with a long stalk. What do you see on the stalk? A number of little cabbages. Yes, they do look like little cabbages, and if we take one and pull off its little leaves, one by one, you will see that they are arranged in the same manner. They will not get much larger. We eat them when they are like this. They are called brussels-sprouts. Do you see the top of it? What is it like? A cabbage with most of its leaves open.

Do you see this cabbage the top of which is like a large white flower? Where are the leaves? On the outside, all round the flower. We call this plant the cauliflower. Can you tell me which part we eat? The flower and the small tender stalks. There is another kind of cabbage which people often mistake for the cauliflower, because it also has a large white head of flower. This is the broccoli. Sometimes, however, this plant has a number of branching flowers of a very dark purple colour, and I daresay this is the broccoli you most often see.

There is another kind of cabbage which, however, is not green. Can you tell me what colour it is? Yes, it is a very dark red. Look at the shape of it. Which one is it most like? The savoy, but its leaves are smooth and not crinkled. What does your mother do with this? She puts it in vinegar. Yes, but first she washes it and then cuts it up in little pieces and sprinkles salt over it. She then puts it in a jar with vinegar and spice, and then we say it is pickled cabbage.

II. **Uses.**—For what did you say we use cabbages? For eating with our meat at dinner. What does your mother do to the cabbage before we can eat it? She washes it and then boils it, and we eat it when it is hot. Do we boil the red cabbage? No, we eat this cold, with cold meat, and sometimes with cheese.

III. **Summary.**—This should consist of the names of the different kinds:—Summer cabbage, savoy, brussels-sprouts, cauliflower, broccoli, and red cabbage. We eat them all for food, and call them vegetables. The red cabbage is not cooked: it is put in vinegar. We call it pickled cabbage.

In repeating each name, the children should be asked to describe the plant, and the teacher should see that the child can really distinguish one kind from another.

SETTING THE TEA-THINGS.

CLASS—THE BABIES.

Apparatus—The various things, mentioned in the lesson, required "to set" the tea-table.

Now I want you to help me get this table quite ready for us to have tea. At what part of the day do we have tea? Yes, in the afternoon, just before little boys and girls go to bed. What meal do you have when you first get up? Breakfast. And after that? Dinner. I think you could all tell me some of the things we put on the dinner-table. Very well, now we want to set the tea-things; what must we first do? Clear the things off the table. What will your mother do with the work on the table? Put it carefully away. And if you have any books or toys, what must you do? Put them all tidily away, and then we can take off the table-cover. What must we do with it? Fold it up smoothly. Now here is the empty table; what are you going to put on it? The tea-tray. Yes, but some people like to have a nice white table-cloth on the table first, and then the tea-tray. What is the colour of it? Yes, and you must always dust it well, and rub it so as to make it shine. Why do we want a tea-tray? To hold the cups and saucers, and to help to keep the nice cloth clean. Well, Mary shall put the tea-tray on the table, and the cups and saucers on the tray. How do you put these? Yes, you stand the cups in the saucers. Can you tell me of what these cups and saucers are made? Yes, they are made of china. How do they feel? Very smooth, and they seem very thin. They are very nice, but you have to be very careful with them. Do you know why? Because they will break if we knock or drop them. What part do we call this? The handle. What is the use of the handle? We take hold of the handle when we want to lift the cup. Why do you not hold the other part of the cup? Because it would be too hot, and we should drop the cup. Is this cup hot now? When is it too hot? When it has tea in it. What is the use of the saucer? It is to stand the cup in, so that if any of the tea is spilt the cloth will not be made dirty; the tea would go into the saucer. What else do we want on the tray besides cups and saucers? Spoons. Where do we put the spoons? In the saucers. Yes, you must never leave the spoons in the cups, for they would tip them over. What would happen then? The tea would be spilt, and perhaps the cups would be broken. For what do you use the spoon? To stir the tea. Why do you want to stir your tea? To mix the sugar with it. In what do we have the sugar? In the sugar-basin. Where do we put the sugar-basin? What else do you want on the tray? A milk-jug for the milk. Yes, and what else? You do not know; well now, when you have emptied your cup and want some more tea in it, what does your mother do with the little bits of tea at the bottom of the cup? She puts them into the slop-basin. Now tell me what you must put on the tray? A slop-basin. But there is something else you will want. A tea-pot. Yes, but if you put the hot tea-pot on the tray it will make some marks on it, so what else do we want? A tea-pot stand. Now look at all the things on the tray and try to tell me what you have forgotten? If I want to put some sugar in the tea-cups what do I use? The sugar-tongs. Where will you put them? In the basin, on the sugar. Have you heard of any other tongs? For what are they used? To pick up pieces of coal and cinders.

Now I think we have all the things we want on the tray, but we want some other things on the table. Can you tell me anything we want? Some bread and some butter. Where do we put the butter? On the bread. What do you use to put this on the bread? A knife. Then, you see, we shall want some knives. What else do we want? Some large plates. For what? To hold the slices of bread-and-butter. Then some small plates. We each want a small plate on which to put our bread-and-butter.

Now there is still one thing we generally have on the table. See, here it is. Do you know what we call it? A cosy. What is the use of the cosy? It keeps the tea hot. How does your mother use the cosy? She puts it over the tea-pot, and presses it down all round. This keeps the tea very hot for a long time. Why do we want to keep the tea hot? Because it is not nice when it is cold.

Now try to tell me the things on the tea-table as I point to them. Now tell me which of them we put on the tray.

CHALK.

CLASS—CHILDREN OVER SIX.

Apparatus—Some pieces of chalk, some whiting, and some lime.

I. **Qualities.**—The teacher, holding up a piece of chalk, should ask the children to tell her what it is. What can you tell me about it? It is *white*. The children should then repeat, "Chalk is white." What have I here? A piece of glass. What am I holding up behind the glass? A pencil. Can you tell me what I am holding up behind the chalk? No. How is that? We *cannot see through it*. The children should then repeat, "We cannot see through chalk."

Now, Charlie, I will let you feel this piece of chalk. What can you say about it? It is *hard*. Look at your finger and tell me what you see? My finger is now white. How is that? Yes, then what else will you say about the chalk? When we touch chalk, it comes off on our fingers. Now all of you say, "Chalk is hard; it comes off on our fingers when we touch it."

What have I here in my hand? A piece of wood. I want some one to come and break this wood for me. You cannot; well, try if you can break the piece of chalk. Yes, that breaks very easily. The children should then repeat "Chalk *breaks easily*." If you were to drop this piece of chalk on the floor, and then tread on it, what would you notice? It would all be broken into powder: because chalk breaks up like this, we say it *crumbles*. When do we say that bread crumbles? When it breaks into crumbs. Yes, and you see chalk breaks into very little crumbs when it is knocked or pressed; so we say it is crumbling. The children should then repeat, "Chalk easily crumbles."

II. **Uses.**—I should think you can tell me one use we make of chalk. Yes, that is right, for writing on the blackboard. The teacher should then point out to the children that the chalk for this purpose is made into convenient pieces, and also show them how awkward it would be to use a large rough piece.

Now boys and girls are very fond of writing with chalk on the floor or door, and sometimes on the pavement. Sometimes, when they cannot get chalk, they get something very much like it from their mother. What is it? Yes, it is whiting, and here is some, and we will put it by the chalk and look at them together. Now, Fanny, squeeze the chalk and then the whiting, and tell me what you notice. The whiting breaks much more easily than the chalk does. Yes, and it feels much softer in your fingers. If you rub some chalk between your fingers and then some whiting, you will find that the whiting is smoother than the chalk. Now this whiting is made from chalk. All the hard pieces are taken out of the chalk, and the soft part that is left is called whiting. The children should then repeat, "Whiting is made from chalk." For what does your mother use whiting? For cleaning teapots, spoons, forks, &c. Why would not chalk do for this? Because the hard pieces would scratch the things we clean.

Now I wonder if any of you have ever seen men building a house. What do they use? Bricks, wood, &c. What do the men use to fasten the bricks together? Mortar. Have you ever seen the men mixing the mortar? Do you know what the white stuff is called that they put in it? No, it is not chalk; it is called lime, and is made from the chalk. The children should then repeat, "Lime is made from chalk."

It would be well, before going any further, to let the children repeat the various uses of chalk.

III. **Where found.**—The children should be told that chalk is found in the earth, and has to be dug out, and at the same time the teacher should point out that it is not dug out of the ground from mines, in the same way as coal, iron, &c., but from pits open to the sky. Children residing in Kent, Sussex, and other parts where chalk is abundant, would be quite familiar with the appearance of the white cliffs and hills composed of chalk, and from these children also the use of chalk or lime in the gardens would easily be obtained.

IV. **Summary.**—This should consist of:—Chalk is hard and white. You cannot see through chalk. Chalk breaks easily, and also crumbles. It is used to make whiting and lime. We write with chalk. Chalk is dug out of the ground.

COPPER.

CLASS—CHILDREN OVER SIX.

Apparatus—A piece of copper, some copper wire, brass, and bronze.

I. **Qualities.**—The teacher, showing the children a piece of copper, should ask them the colour of it. It is of a *reddish-brown* colour. It is bright. On feeling it they will discover that it is *hard*. The children should then repeat, "Copper is hard, and of a reddish-brown colour."

The teacher should then tell the children that copper can be hammered out into very thin sheets. Do you know anything else that can be hammered out? Yes, gold and silver. What do we say of these things because they can be hammered out? We say they are malleable. The children should then repeat, "Copper is malleable."

The teacher, holding up a piece of copper wire, should ask, What have I in my hand? A piece of wire. Of what is it made? Copper. Can you tell me any other kinds of wire you have seen? Gold wire, silver wire, iron wire. What do we say of all these things because they can be drawn out into wire? We say that they are *ductile*. The children should then repeat, "Copper is ductile."

If we put copper into a very large fire or furnace, do you know what would happen to it? It would melt. Tell me some other things that melt in the fire? Iron and lead. What do we say of these things that melt in the fire? They are *fusible*. The children should then repeat, "Copper is fusible."

II. **Uses.**—Now, children, can you tell me any use we make of copper? Yes, we make it into wire. For what do we use copper wire? For bell wires. Perhaps some of you have seen something in your mother's kitchen made of copper. Yes, a copper kettle. What does your mother do to it? She rubs it to keep it bright. Does she rub the iron kettle? No, she brushes that to make it look black and bright, but she rubs off all the black on the copper one. What makes it get black? The smoke from the fire. Some of your mothers may have saucepans made of copper. They are often used to make jam in. We must be very careful indeed to keep copper saucepans clean, for it is very dangerous to cook food in a dirty one. A dirty saucepan gets rusty, and this rust is very poisonous. It is of a green colour, and a very, very little piece would be enough to make you very ill indeed. Copper articles are now generally made with a kind of tin lining.

Now, besides all these things, copper is used for putting all over the bottom of ships. This preserves the ships very much, and prevents weeds and other things, such as shell-fish, clinging to them.

Copper is also used for covering roofs of large buildings. The teacher should point out any buildings in the neighbourhood covered in this manner, and should tell the children that the copper would then be of a greenish colour.

The teacher, now showing the children a piece of brass, should ask them what it is, and should then tell them that brass is made of copper mixed with zinc. The children should then repeat, "Brass is made of copper and zinc."

The teacher should then proceed by holding up a penny. See, here is something else made from copper. What is it? A penny. Do you know of what pennies are made? No. Well, they are made of copper mixed with tin, and sometimes other metals. We call this metal *bronze*. The children should then repeat, "Bronze is made of copper and tin." The teacher might then inform the children that the metal used for making bells, cannons, guns, &c., is made by mixing other metals, chiefly tin, with copper. Watches, chains, &c., are often made of copper mixed with other things, and look as if they were made of gold. They do not keep bright unless constantly cleaned.

IV. **Where found.**—Copper is found in very many places. It is dug out of the ground. The men are called miners, and the places where they work are called copper mines.

V. **Summary.**—This should be written on the board as the lesson proceeds, and should afterwards be copied by the children on their slates, and if possible be afterwards written down from memory.

Copper is hard and of a reddish-brown colour.
Copper is malleable, ductile, and fusible.
Copper is used for making kettles, saucepans, and wire.
Brass, bronze, bell-metal, &c., are made of copper.
Copper is dug out of the earth.

THE PEA AND THE BEAN.

Class—Children over Six.

Apparatus—Specimens of each. Pictures of the plants.

I. **Description.**—To-day we are going to talk about another vegetable. Can you tell me the name of it? (The teacher should show the children a few peas before commencing.) Yes, this is a pea. Now tell me what you can see? Something green. Do you know what we call this? The shell. That is right, you do see the shell, but when it is like this we call it *the pod*. Now let us look at this pod: what colour is it? Green. What have I now done to the pod? Opened it. How many parts are there? Two. And what do you see in the middle? The peas in a row. Are they all of the same size? No, there are some large ones and some small ones. What colour are the peas? Green. Then they are the same colour as the pod? No, the pod is much darker than the peas. What will you say about the peas? They are of a very light green colour. What shape are they? Round. Now look again at the pod, do you see me pulling something off the inside? Yes, it is like a skin. What is there at the end of this pod? A stalk. Do you know what the stalk does? Yes, it joins the pea-pod to the plant. The teacher should then show the picture of this plant to the children and draw their attention to the pods hanging to the thin haulms, and at the same time tell the class that this plant grows about three to five feet high, and that sticks are often put in the ground for the plant to cling to. The height of the plant would be shown by pointing to objects in the room of the necessary size. The children will then see from the thin stalks or haulms that the pea, to grow upright, must have some support. In country districts the teacher would of course direct the attention of the children to the pea-fields and the reasons why sticks are not used. A closer description of the plant would readily be obtained.

Now tell me the different parts of this plant. The pod or shell, the peas, and the stalks or haulms.

What do we do with peas? We eat them. Yes, but before you eat them we must shell them. Can you tell me what that means? Yes, take them out of the pods. How do you do that? Yes, you crack the pod, and then draw the peas out with your finger and thumb. What else must be done before we can eat them? They must be put into the saucepan to boil, and when they are cooked we eat them before they get cold. What do we do with the shells? We throw them away. Why? Because they are not good to eat.

Have you ever seen peas of any other colour? Yes, some are yellow. How is that? They are dried ones. For what do we use these dried peas? Yes, you use them with sticks for pea-work. Have you not seen your mother use them? Yes, she puts them in soup, and sometimes she makes puddings with them. What is the difference between these and the green peas? They are very hard. What else? Smaller, and in halves, or pieces. What does your mother do with them before she puts them into the soup? She soaks them in water to make them soft.

Now, here is another vegetable something like the pea. Do you know the name of it? The bean. What can you tell me about it? It is green. Can you break it as easily as you could the pea? No, it is thinner and bends more. Now, we will open it. You see it has two parts like the pea, but the little beans inside do not stand up like the little peas did inside the pod, but they keep inside one of the sides. The skin inside the pod seems thick, and the beans appear to be in it.

Now look at the shape of the bean. It is not round like the pea, but flat, and of a dark colour, with spots on it.

Which part of the bean do we eat? The shell or pod. Did you eat the pod of the pea? No, we threw that away. What do you do to the beans to get them ready for eating? We cut them into thin slices, and then they are cooked in the saucepan.

Now look at this picture of the bean. You see the pods hang to the stalks very much like the pods hang on the pea-plant. The teacher should then point out that these stalks are much stronger and taller than those of the pea, but that they are also propped up with sticks. The short dwarf kind might be briefly mentioned. The flower of the pea and bean should be described and compared. Now there is another kind of bean, with very thick long pods. Can you tell me what it is called? Yes, the broad bean. Do you know what part we cook of the broad bean? The inside part, just like the pea. What do we do with the pod of this plant? Throw it away. The teacher might show a picture of this plant, and let the children notice that it does not require to be supported like the pea and the bean.

Summary.—This should be made as the lesson proceeds.

Peas grow inside the pod. We eat the peas and throw away the pod.

Beans also grow inside the pod, but we eat the pod of this plant.

Of the "broad bean" we eat the bean and throw away the pod.

SALT.

CLASS—CHILDREN OVER SIX.

Apparatus—Salt, rock-salt, glass of water.

I. **Qualities.**—The children to be shown a piece of salt, and to be asked, What have I in my hand? What can you tell me about it? It is *white*. Yes, but when it is first found it is like glass. What colour did you say glass is? It is colourless. Salt is colourless, but this salt is white. Now look at the salt and this piece of glass; pass your finger along the glass, and now along the salt. What do you notice? The glass is smooth, but the salt feels rough. Do you know what makes it feel rough? The little pieces. Do you know what we call these little pieces? They are little grains. Do you know anything else that is made up of little grains? Sugar. We say that these things are *granulous* The children should then repeat, "Salt is white and granulous." You see this large piece of salt. Can you break it? Yes, very easily. Then what can we say of it? It is *brittle.* The children should then repeat, "Salt is brittle."

What have I here? A glass of water. What have I done? Put some salt into it. What has happened to the salt? (The teacher would find it necessary to stir it well; it would be better to put the salt in the water a little time before it is wanted for this.) It has all gone in the water. How can you tell that the salt is in the water? By tasting the water. Of what does it taste? Of salt. Do you know any other things that will dissolve in water? Sugar, soda. What do we say of those things that dissolve in water? They are *soluble.* The children should then repeat, "Salt is soluble."

If you put salt into a very hot fire it will melt. Tell me some other things that will melt in a large fire. What do we say of all these things? They are *fusible.* Then tell me what we can say of salt. Salt is fusible. This should then be repeated by the children.

II. **Uses.**—When do we use salt? When we eat our food. What do we do with it? We sprinkle it over our food. Why? To make it taste nice. Yes, and it is very good for us to eat some. Have you ever seen any other kind of salt besides this? Here is a piece. Do you know for what this is used? Horses often have it put into their mangers. (The teacher should explain this, should the word appear unfamiliar.) They like to lick it; many other animals are very fond of salt It is sometimes given them for food.

If your mother has a very large piece of meat—more than she wants to cook—do you know what she does with it? She puts some salt all over it. Do you know what this does? It makes the meat salt. Yes, but it does something else. Supposing your mother left the meat for several days without doing anything to it, do you know what would happen to it? It would go bad, and we should not be able to eat it. Now tell me, then, what the salt does. It keeps the meat from turning bad. This is very useful to sailors who go a long way, for they can take a great deal of meat with them, and it always keeps good. Fish is salted as well. Sometimes besides being salted the fish is dried, and this enables us to keep it a long time. Then there is another kind of salt that I will tell you about. It is used for medicine, and is called Epsom salts; I daresay some of you have had to take some when you were not well.

Sometimes we put salt on the garden, and then we say it is used for manure.

III. **Where found.**—The children should be asked, Who has been to the seaside? What did you see there? The sea and sand. Did you taste the sea water? How did it taste? Very salt. Yes, from the sea water we get large quantities of salt. When you are a little older I will tell you how we get the salt from the sea water.

Then we find salt under the ground. Do you remember how the men got the coal out of the coal pits? Well, the salt is obtained from mines much in the same way. There is one very large salt-mine where the salt has been cut so as to form houses, churches, and streets, just like those outside the school. We call this an underground town. Can you tell me anything else you know that is under ground? Yes, the Underground Railway.

IV. **Summary.**—Salt is white, granulous, brittle, soluble, and fusible.

It is used for eating with our food, and is sometimes given to animals.

It is used for preserving meat and fish.

Salt is obtained from the sea; it is also dug out of mines.

THE BEAR.

CLASS—CHILDREN UNDER SIX.

Apparatus—A picture of the bear, and of comparative sizes of animals.

I. **Description.**—The children, after looking at the picture of the bear, should be asked to describe it. What kind of head has the bear? A large, broad head. Its ears are rather large and pointed, and its eyes are small. Now look at its legs. They are large, and seem very strong. How many toes do you see? Five on each foot. What are these? Very long claws. What shape are they? They are hooked. Do you know why they are hooked? Yes, they help them to climb. What are you going to tell me about the body? It is large, and covered with very thick, warm fur.

II. **Habits and food.**—The teacher would have to tell the children that there are several different kinds of bears, and that these differ somewhat in their habits and food. The brown bear, the white or polar bear, the black bear, and the grizzly bear.

You told me just now that the bears had claws for climbing. Do you know why the bears climb? To get food from the trees. such as honey, insects, fruit, &c. Bears also eat the flesh of animals.

During the winter, however, the bears go into caves and sleep nearly all the time. They are very fat before they go to sleep. They wake up when the warm weather comes, and if you were to see them you would say they were very thin. What makes them so thin? They have had nothing to eat all this time. How do you think they feel? Very hungry. Yes, they come out of their caves ready to eat anything that they see. I don't think you would like to meet a bear when it first comes out of its cave.

There is one kind of bear—the white bear—that lives in very cold places, where there are great fields of ice. This bear is very fond of fish.

III. **Uses.**—The flesh of the bear is eaten much in the same way as we eat pork. Its skin is very useful to the people who live in cold countries, as it makes them warm coats, caps, and gloves, and some of the skin without the fur is made into strong leather, while the fat of the bear is very useful for making pomade. For what do we use pomade? For putting on our hair to make it smooth.

IV. **Summary.**—This should be made up as the lesson proceeds, and should consist of the following:—

The bear has a large, broad head. Its ears are pointed, and its eyes small.

The bear's body is large and heavy, and has thick, warm fur on it.

The bear's legs are strong and heavy. It has long, hooked claws on its five toes, which help it in climbing and in catching its food.

THE SCHOOLROOM.

Class—The Babies.

Now, children, can you tell me what name we give to this room? Yes, the schoolroom. Well, I want you to tell me all you can about your schoolroom. What can you say about the size of it? It is very large. To give the children some better idea of the size, the teacher might compare it with some of the ordinary living rooms. The children should then repeat, "Our schoolroom is very large." How does the light come into the schoolroom? Through the large windows. How many windows are there? Can you tell me why we sometimes cover up the windows? Because the sun is too strong. What do we cover the windows with? The blinds. Why do they not make the room dark? Because they are thin enough for the light to come through. Why do we sometimes open the windows? To let fresh air come in and the hot air go out. Now look at the end of the room. What do you see there? A gallery. What is the use of the gallery? It is for us to sit upon. When do you sit on it? When teacher wants us to talk about things, or to sing. Then we have something else to sit upon. What is it? A form. Where do we put the forms? By the table. Have you seen the big boys and girls on forms? Yes. What do they have in front of them? Desks. For what do they use them? To put their slates and books on when they write. But you do not always sit in school. What else do you do? We stand. Where do you stand? To the line. Where is the line? All round the room. How is it made? Little brass nails are put in the floor. Yes, but sometimes black lines are made with paint. Why do you want this line to help you to stand? So that one little girl or boy should not get in front of others. All must have toes on the line. Sometimes we march along this line. Now if you look on the floor you will see some other lines. What are they? The class lines. Yes, there is a line for each class. Now see what a nice clean floor you have, and you must try to keep it clean. Can you tell me how you can help to keep the floor clean? We must wipe our boots before we come in. On what will you wipe them? On the mat at the door. What else do you do before you come into the room? Take off our caps. Do you take your hat off, Mary? No. That is right; only the little boys take their hats off at the door; the little girls wait until they get to their teachers, who take care of them. Now there is another way you can keep the floor clean and tidy. You must not drop pieces of paper about; and if you see any on the floor, what should you do? Pick them up. Where would you put them? In the paper-basket. Where is the paper-basket? Under the table. Where is the table? In the middle of the room. What can you see on the table? A table cover. And what besides? Some books. Whose books? Teacher's. For what does she use the very large books? She calls our names out of them. What else can you see? Pen and ink. Who uses them? The teacher when she writes on paper. What does she use when she writes on the board? A piece of chalk. And what do you use when you write? A piece of pencil. On what do you write? On slates.

Now look at the walls. What do you see on them? Pictures. What kind of pictures? The teacher should now exercise the children by asking them to name some of the pictures. Why do we like to have pictures on the walls? To make the room look nice. Yes, they make the room look bright and happy. For what else do we want pictures? For us to learn about them.

But you have forgotten to tell me about the fireplace. What use is it? We have large fires in it when the weather is cold, and these warm the room so that we do not feel the cold.

CORK.

Class—Children over Six.

Apparatus—Some pieces of cork, a piece of undressed cork, a boot-sock, picture of cork tree, a pan of water.

I. **Qualities.**—A piece of cork to be shown to the children and the description of it obtained from them. By looking at it they will discover that it is of a brown colour, and also that it is full of little holes. One or more of the children should hold a piece of cork in one hand and a piece of wood in the other, and should then be asked what they notice. The cork is not as heavy as the wood. The children should then repeat, "Cork is very light; it is of a brown colour." The teacher should now put a piece of cork and a stone into a pan of water, and ask the children to describe what happens. The stone falls to the bottom of the pan, but the cork stops on the top of the water. Yes; we say the stone sinks and the cork floats. The teacher should now pour some water on a piece of cork. Where does the water go? It stays on the top or rolls off on to the table. Does it go through the cork? No. How do you know that it does not go through the cork? Because it is not wet on the other side. Do you know anything else through which water will not pass? Yes; leather, slate, etc. What do we say of those things? They are waterproof. Then what can we say of cork? It is waterproof. The children should then repeat, "Cork floats on the water and is waterproof."

The teacher should bend a piece of cork before the children, also press a piece and let them notice what happens after the pressure is removed. It returns to its place or shape again. Tell me some other things that do this? India-rubber. What do we say of these things? We say that they are elastic. Then what else can you say of cork? It is elastic. The children should repeat this.

II. **Uses.**—The children should be asked for what they have seen cork used. Yes; it is used for putting in the necks of bottles. Do you know why it is used for stopping bottles? Would a piece of wood do? Why not? It is too hard. Would some paper do? No; it is too soft and would get wet, and then what was in the bottle would be spoilt or come out. Now let us see why cork is good for this purpose. The teacher should then show the children a piece of wood and a piece of cork of the same size. Taking the bottle she should show the children that the piece of wood cannot be put into it, but by squeezing the piece of cork she is able to put that in.

The children should then be shown that the piece of cork then swells out to the sides of the bottle and presses against them, so as to get back to the same size that it was at first. What did you just tell me about cork because it goes back to the same shape or size after being pressed? It was elastic. Yes; and it is because cork is elastic that it is so useful for stopping bottles.

When we tried to stop the bottle with paper it got wet and let the water out. Will the cork do this? No; it is waterproof. The children should then repeat, "Cork is used for stopping bottles because it is elastic and waterproof."

Now I want you to tell me something else for which cork is used. I daresay some of you have seen your mothers put something inside their boots. What do we call these things? Socks. Yes; and they are made of cork. See here is a cork sock. Does it look like cork? What is this that you see? Something soft for the feet to go against. Where is the cork? Inside. Do you know why cork is used for these socks? Would a piece of iron do? No; it would be too heavy and hard. Yes; we want something that is very light and elastic. Then there is another reason why cork is useful for these socks. Sometimes when your boots are thin your mother puts cork socks into them. Do you know why she does this? What happens to your feet if you have thin boots? They get wet. Yes; and these cork socks keep them from getting wet. How is that? Because they are waterproof. The teacher might also mention that they also help to keep the feet warm. The children should then repeat, "Cork is used for making socks because it is light and waterproof."

Now, there is another use of cork, but I do not suppose you know much about this. What does the cork do when you put it into water? It floats. Yes; and you will notice that you cannot easily keep the cork under the water. Knowing this, men have used it in making a kind of boat to be used when the sea is very rough and other boats would be upset. Boats of this kind are called life-boats. When people are learning to swim, they sometimes wear cork belts to help them. The teacher should also mention the use of life-belts for saving people who have fallen into the water.

Although these uses of cork would be unfamiliar to London children, yet to children living by the sea they would be well known, and, in fact, the teacher might enlarge somewhat on the life-saving apparatus.

Have any of you been fishing? What do you use? Well, of what are the floats made? They are sometimes made of cork.

III. **Where obtained.** The teacher would have to tell the children that cork is the bark or outside of a tree something like the oak tree. Have you ever seen an oak tree? Where? What grows on the oak tree? Which part is the bark? The teacher should show a picture of the tree, or better still, a picture showing the cutting of the bark from the trunk, and question the children on what they can see. Then it might be pointed out to the children that the cork tree keeps its leaves all the year round, thus differing from our oak tree, which loses its leaves all the winter. What do we call trees and plants that keep their leaves all the year? We call them evergreens.

IV. **Summary.**—This would be written on the blackboard during the progress of the lesson, and afterwards copied by the children or written from memory as an exercise for home work.

Cork is of a brown colour, and is very light.
Cork floats on the water, and is waterproof and elastic.
Cork is used for stopping bottles and for socks.
Lifeboats and life-belts are made of cork.
Cork is used in fishing and for swimming.
Cork is the bark of an evergreen tree—a kind of oak.

THE HEN.

Class—Children under Six.

Apparatus—Picture of hen (A. K. Johnston), specimens of feathers and foot; if possible, a stuffed specimen of the bird.

I. Description.—Show the picture and stuffed specimen to the children and let them describe it. It has a small round head. Now look at its eyes, what shall we say about them? They are round and very bright. Show me its mouth. Yes, we call it the beak. What can you say about it? It is very hard and very strong. It has sharp points. How many? Two. What is this on the top of the head? Something red. Yes, we call this the comb. Show me the comb on this bird, what can you tell me about it? It is much larger and brighter. Do you know what we call this bird? Yes, it is the cock. Which has the larger comb? The cock. What are you going to tell me about the neck? It is short and covered with feathers. Now look at its body. With what is this covered? With thick feathers. The teacher should then draw the attention of the children to the pretty colours of the feathers, the different kinds (*i.e.* long ones, small ones, and very little soft ones on the breast and close to the body), and the way they grow, close together, overlaying each other. The children should then compare the feathers of the hen with those of the cock. What are you going to tell me about its legs? How many are there? Two. They are hard and without feathers. How many toes has this bird? Four. Now look at the end of its toes. What do you see? Some sharp nails or claws. Yes, and these are very strong. What has this hen on each side of its body? A wing. For what is it used? For flying. Does the hen fly like other birds? Why not? Because its wings are cut. Does this hurt it? Do you not have your hair cut? Does it hurt you? Why do people cut the wings of chickens? To stop them from flying away.

II. **Habits and food.**—Who has seen a hen? Where did you see it? What was it doing? Scratching up the ground, and picking with its beak. What has it to help it scratch up the earth? Its strong claws. If you watch it closely you will see that it picks up worms and little insects. Can you tell me what else the hen eats? Corn, bits of potato, bread, etc. Have any of you hens at home? Who feeds them? What do the chickens do when you go out to feed them? Yes, they come running round you. The little ones follow the mother, who is very kind to them, and shows them where to find the nice pieces. Who helps the hen to find food for the little chickens? Yes, the cock does. He walks about scratching up the ground, and then leaves it for the hen and chicks. Do you not think this is very kind? But if any other birds come, the cock gets angry and flies at them, and will fight for a long time. Now look at the leg of the cock. We call this a spur. The cock uses it when he fights.

How does the hen call the chickens to get the food? She makes a noise. Do you know when else she makes a noise? Yes, when she has laid an egg? What do we call this noise? Cackling. Does the cock cackle? No, he crows. Yes, and he always crows very early in the morning, directly it is light. This is when he awakes. Where does he sleep? In his house, on a pole or perch. We call this roosting. Do the hen and chickens roost? What do they do? The hen sits down, and spreads out her wings, and the little chickens get under them. Yes, this keeps them very warm. Why do they want covering over with the hen's wings? Because they have not enough feathers to keep them warm. The teacher should explain that the hen also covers them over with her wings when any danger arises.

III. **Uses.**—Can you tell me any use of hens? They lay eggs. How often do they lay them? Sometimes every day. When the eggs are first laid what do we call them? New-laid eggs. If you fetch one from the nest, how does it feel? Nice and warm. What colour is it? White. What do we do with eggs? Eat them. How? First we boil them, and then take off part of the shell. What do you then see? Something white. And when you have eaten this? Something yellow. For what else do we use eggs? For making cakes, puddings, etc. The teacher should then point out that some of the eggs are put into a large nest, and the hen sits over them, and that after a time the shells crack, and little chickens come out.

Do you know any other use of these birds? Sometimes we eat them. Yes, and they make very good food, especially for people who are not well.

Then the feathers are very useful. Can you tell me how we use the feathers? The very soft small ones are used for beds, etc. The large, pretty feathers are used for ornaments, for trimming hats, etc.

IV. **Summary.**—The hen has a small, round head, with bright eyes, and strong, hard, sharp beak.

Its body is covered with thick feathers. The cock's feathers are very pretty.

It has four toes, with strong claws for scratching for its food.

It lives on corn, worms, pieces of bread, potatoes, etc.

The hen gives us nice eggs. The flesh of these birds is very good to eat, and its feathers are used for beds, ornaments, etc.

THE PLAYGROUND.

CLASS—THE BABIES.

Now, little ones, we talked about your schoolroom last week, and you told me all about the things we see in the room and for what they are used. Now tell me what you see when we look out of the window? The playground. What is the playground? The place where we go to play. When do you go to play? In the morning and in the afternoon. How do you get into the playground? Through this door. Well, let us think it is time to go into the playground; what do you do first? Stand in our places, then march out through the door. And directly you get through the door what may you do? Play about. At what do you play? Yes, some of you run after each other, and sometimes after the teacher. Do you like this? Yes; it makes us so warm when the weather is cold. At what else do you play? Sometimes we swing. What kinds of swings are there in the playground? Wooden ones, with seats. These wooden swings are often called see-saws. Then sometimes you have other things to play with. Can you tell me any of them? Balls and ropes. What do you do with these balls? Throw them about and run after them. Do you like playing with the ball? Why? Because it is nice to catch, and to throw it to somebody else. What do you do with the ropes? Skip. I think most of you are too little to skip, but I expect you have seen the big girls skip.

Now you must be very careful when you are in the playground playing, for sometimes you push against one another, and then what happens? Some one falls down, and then gets hurt. The biggest of you should play very gently; and if you see a little one wanting to get something, what should you do? Go and help him get it. Then if one of the very little ones wants to have the ball, and you, Tommy, have it, what should you do? Give it up to him. Yes, and play with him. You will find that he will soon get tired of it, and then you can have it again and play with it yourself.

There is one thing that little boys and girls are very fond of doing directly they get into the playground. Do you know what that is? Well, I will tell you; they make a very great noise; they scream as loudly as they can. Now, you should not do this, for it is very rude; and, besides that, it makes your teacher's head ache, and the children who are in the school cannot work while you make such a great noise. You should play and be happy, but be as quiet as you can. Of course you may talk and laugh; but what must you not do? The children should then repeat, "We must be as quiet as we can when we are playing; we must not scream, nor push one another about."

What is the use of those high poles in your playground? They are for the big boys to climb upon. Are they for you to use? No. Then you should be very careful not to go near them in case a big boy should knock you. When you grow big you will be able to climb up them, but you are too little to use them now. If you were to try and climb up them you would only fall and hurt yourself.

In schools where the Kindergarten games are used, or where the good practice of the teacher playing with the children prevails, some of these games would undoubtedly be mentioned by the children, and should form part of the conversation of this lesson.

How do you know when it is time to leave off playing? The teacher tells us. How does she tell you? She taps with a pointer against the post, or sometimes she rings a bell. What should you do directly you hear the tap? Stand quite still. What does your teacher then tell you to do? To go and stand to the line. What do you next do? March into school. Yes, you should march into school and take your places very quietly, and forget all about your play. What do you have to do in school? All that our teacher tells us to do. Yes, when you are in the playground you can do just as you like—run about, and go where you wish, and talk and play and laugh; but when you are in school you must do just what your teacher tells you, and you must be very quiet indeed, or you will keep the other children from doing their work. They cannot do their lessons when little boys and girls make a noise.

THE ROAD TO SCHOOL.

Class—The Babies.

I want you all to think about what you saw coming to school this morning, and then to tell me. When you were quite ready for school, what did you do? Said "Good-bye" to mother. And then where did you go? Into the street. What do you call your street? Is that the name of your street, John? No. What is your street called? And yours, Tommy? And yours? Yours? You see, then, that every street has a name of its own. The children should then repeat, "Every street has a name of its own."

Suppose I wanted to come and see you, and was in your street, how should I find your house? We should have to tell you the number of it. What is the number of your house? What number is next? And what number on the other side? The children should repeat, "Every house in the same street has a different number."

Now this morning when you came out of your house, on what did you walk? The pavement. What is the edge of the pavement called? The kerb. On what part ought little children to walk? Yes, you should always walk quite in the middle of the pavement or close to the houses, and never walk on the kerb. If you walk on the kerb, what are you very likely to do? Slip off and tumble into the road. What part do you call the road? The middle of the street. What is on each side of the road? Pavement and houses. As you were coming to school, what did you see? A horse and cart. Where was it? In the road. Do you ever see horses and carts on the pavement? No, they always keep on the road. What did you see in the cart? Potatoes, carrots, turnips, cabbages. Who can tell me whose cart it was? The greengrocer's. What was he doing? Going along the road and calling out to let the people know what he had to sell. Yes; sometimes he knocks at the doors, and then what does he say? "Do you want any vegetables to-day?"

Did you see any other cart this morning? This little boy says he saw a cart with bread in it. Whose cart was that? The baker's. What did he do? Left the bread at the houses.

Mary says she saw a man with coals in a cart. What does the coal man do? He calls out in a loud voice.

This little girl says she saw a cart with fish in it. Whose cart was that? The fishmonger's. What were you going to say, Harry? I saw the fishmonger pushing a barrow with fish on it. Who can tell me about another kind of barrow? The baker has a kind of barrow. Yes, but the baker's barrow is very different. How is it different? It is covered up like a large box. That is quite right. Why is this? To keep the bread dry when it rains. But the fish gets wet when it rains. Yes, but it does not hurt the fish to get wet. What else have you seen the baker with? A large basket. And the fishmonger? A tray on his head. Who else carries a tray? The butcher. Yes; but who is it that carries a tray on his head and rings a bell? The muffin man. What does he sell? Nice things for tea.

What else do you see in the road besides carts? Omnibuses and cabs. For what do we use omnibuses? To ride in when we want to go a long way. Where do the people sit? Some sit inside and some get on the top and sit outside. Could you get on top? Oh, no; only men and very big boys. Do men ride on the top of cabs? No; inside. Which is the larger, the omnibus or the cab? The omnibus.

Then you see with all these horses and carts, etc., in the road it is not very safe for little boys and girls to go off the pavement or to play near the edge of it. Sometimes we are obliged to cross the road: what must we do then? That is right. We must wait until the road is clear, and then go right across without stopping, and keep looking to see if a horse and cart are coming.

Now there is something that you must have seen this morning standing at the edge of the pavement. Try and tell me. Lamp-posts. For what are they used? To give us light in the evening. Do you ever see them alight in the day-time? Yes, when it is dark. What sometimes makes it dark in the day-time? The fog. Who lights the lamps? The man with a long stick. Do you know what burns in the lamps? Yes, it is gas. The children should then repeat, "The lamps give us light in the evening."

Then there is a very thick kind of post at the edge of the pavement, not so tall as the lamp-posts. What is it? A letter-box. Are there as many letter-boxes as there are lamp-posts? No. How do you know a letter-box when you see it?

It is red. It has a hole for the letter to be put in. What becomes of the letter after you have put it into the box? A man comes with a bag and takes it away. What do you call the man? The postman.

Now I am sure some of you must have seen something else. Yes, we often see dogs in the street. Where do they run? Sometimes on the pavement, and sometimes in the road. We do not mind dogs running on the pavement. They will not hurt us.

The teacher should then get the children to speak about the shops, and at the same time caution them about stopping to look at the pretty things, for that would make them late at school; and if they stopped long on their way home their mother would think they were lost, and be very much troubled.

Then organs, and other things should be alluded to, and the same warning about stopping on the road to or from school should be given to the children.

THE DUCK.

Class—Children under Six.

Apparatus—A picture of a bird, a stuffed specimen, or the foot, the wing, and some feathers. The foot of the hen.

I. **Description.**—Ask the children to name the bird. Yes, and we are going to find out all we can about it. What kind of head has it? Small and rather long. What about its beak? It is flat and broad. What kind of neck has it? A short one. What can you tell me about its body? It is covered with very smooth, pretty feathers. What shape is it? It is long, something like a boat. What has it each side of the body? A wing. Now look at its legs and feet. What can you say about them? No feathers on them, but covered with a hard skin. The teacher should show the foot of the duck and of the hen to the children, and get them to point out the differences, and then show the children why the duck's foot is webbed and the hen's is not. After comparing the feet of the birds, the teacher, by way of recapitulation should proceed to compare the other parts, *e.g.* The beak of the hen is hard, curved and pointed, while the duck's is soft, broad, and not pointed. Again, the arrangement of the feathers is very different. The feathers of the hen are loose, while those of the duck are very compact.

II. **Food and habits.**—Have you ever seen a duck? Where have you seen it? In the park. What was it doing? Swimming in the lake. Does the hen swim? No. It does not like the water. What did you tell me about the duck's feet? They have a skin joining the toes together. What good is this? It helps the duck to swim. Why does not the hen want this skin? Because it lives on the land, and has to scratch in the ground for its food. Have you not seen the duck on the land? Yes, but it cannot walk about very well. How does it walk? It swings about first on one side and then on the other. Do you know what we say of the duck for walking like this? We say it waddles. The children should then repeat, "The duck waddles or walks from side to side." Can the duck run? No, when it wants to go quickly it is obliged to use its wings, and then it hardly touches the ground with its feet.

The duck always lives near the water, and gets its food from it. Do you know what the duck finds to eat in the water? Little fish. Yes, and small animals and insects. The duck dips its beak into the water and brings up a mouthful of water, mud, and insects. It is able to keep the insects in its mouth and send out all the things it does not want. Have you seen your mother take the cabbage up when it is cooked? What does she first put it into? A strainer, to let all the water off. Well, the duck has something in its mouth that helps him to strain the water from the insects, etc.

Do you remember what we called the noise the hen made? Yes, we said the hen cackles. Can you tell me what we call the noise that the duck makes? Yes, we say the duck quacks. And what does the cock do? It crows.

III. **Uses.**—Can you tell me any use we make of ducks? Sometimes we kill and eat them, and they taste very nice.

Why are they kept in the parks? You do not know; well they are kept there because they look very pretty on the water. Cannot they fly away? No. How is that—they have wings? Yes. But they are cut a little, just like the hens', and this prevents them from flying. Now there is another use we make of ducks. What did you say we got from the hen? Eggs. Yes, and the duck lays eggs. Have you ever seen a duck's egg? Well, here is one. Is it like the hen's egg? It is the same shape. What else? It is not the same colour. What colour is it? It is a very pale green. What colour is the hen's egg? White. Can you tell me anything else about this egg? Yes, it is larger than the hen's. The children should then repeat, "The duck's egg is larger than the hen's, and is of a very pale green colour."

If you had a duck's egg you would hardly tell it from the hen's egg, for it tastes somewhat the same. The white of the egg, however, is more the colour of glass, and shines more than that of the hen's.

There are other parts of the duck which are very useful. The feathers are very soft on the breast, and are used for making beds and pillows.

IV. **Summary.**—The duck has a small head. Its beak is flat and broad. Its body is covered with pretty smooth feathers. The feet of the duck are webbed.

The duck is fond of water, and cannot walk very well.

It lives on small fish, animals, and insects.

The duck lays eggs; its flesh is very nice, and its feathers are used for beds.

TEA.

Class—Children over Six.

Apparatus—Some tea. A picture of the plant. Some tea-leaves.

I. **Description.**—The teacher, holding some tea in a saucer, should ask, What have I here? What can you tell me about it? Look at this little piece. It is black, hard, and twisted. Do you know what we call each little piece?

A leaf. Does it look like a leaf? When your mother is going to throw the tea-leaves away ask her to let you look at them. Can you see this one? You see it is not twisted. You can open it Does it look like a leaf? What shape is it? Long and narrow. Here is a picture of the tea plant; let us see what we can find out about it. When this plant is about five or six feet high it has finished growing. Do you know how high that is? Your father is not six feet high, but he is more than five feet. So you see the tea plant is taller than your father. You have told me something about the leaves. They are long and narrow. What colour are they? But they are not brown when they are on the plant. They are a dark green colour, and very glossy. Do you know what is meant by that? To which part am I pointing now? What is the colour of the flower? Yes, it is a small white flower. Do you know the name of the country where the tea plant grows? What are the men called? Chinese. Have you ever seen one of these men? How do you know them? Perhaps you may have seen one in the street. What did you notice? He had very strange-looking eyes. He was not dressed like other men dress. He had a long piece of hair down his back. (Should there be a picture of the Chinese in the school, it would be advisable to show it to the children. W. and A. Johnston publish a capital one.) Would you like to know what is done to the bright dark green leaves to make them like this? The leaves are picked off the plants very carefully one at a time by the Chinese. These leaves are then left in the sun to get dry. When dry they are put in a flat pan or plate over the fire, and are carefully turned over and rubbed in the hands to make them curl round. This makes the leaves get twisted up like you see them. According to the way this drying is done, we get good or bad tea. The green colour gradually goes off, and the dark black colour, like you see tea, comes in its place. The children should be told that tea is also grown in India.

II. **Uses.**—For what do we use tea? To drink. But we cannot drink this. What do we have to do to it? We must pour water on it. What kind of water? Boiling water.. Where do we put the tea? In the teapot, and then the boiling water is poured over it. Do we drink the tea directly? No, we leave it for a little while to draw. What do you do with the teapot? Sometimes it is stood on the hob, and sometimes it is covered with a cosy. Why is this done? To keep it hot, and then the tea gets stronger. Why? Because the hot water makes the tea come out of the leaves. If you were to pour it out directly you had made it, the tea would look almost like water. What is the colour of tea? Brown. What do we put in our tea before we drink it? Sugar and milk. Yes, and you will notice if you let the teapot stand too long the tea is so bitter that you want a great deal of sugar. It is not good to let the tea stand a long time after it has been made. When do we drink tea? At tea-time. Yes, and some people have it at their breakfast? What do you drink for breakfast? Coffee. Yes, but some people do not like coffee, and then they have tea.

III. **Summary.**—This should be written on the blackboard as the lesson proceeds:—

The tea plant grows five or six feet high. The leaves are of a dark green colour, and are very glossy. It has a small white flower.

The tea plant grows in China and India. The Chinese pick the leaves one by one; these are carefully dried and rolled.

We use tea as a drink.

MILK-JUG, BASIN, CUP AND SAUCER.

CLASS—THE BABIES.

Apparatus—Milk-jug, basin, cup and saucer.

The teacher having placed these objects in front of the children, should ask for the name of each, and then ask the children to point to each when named. This should be repeated several times until every child can clearly distinguish one from the other.

Now, little ones, what did you tell me this is? A jug.

Where have you seen a jug before? At home. Was it like this jug? No. How was it different? It was larger, and not the same shape. What does your mother put into it? Water, and sometimes beer. Do you know for what this jug is used? Yes; it is used for milk. When we want to put some milk on the table we put it in a jug like this, and therefore we call it a milk-jug. When do we want milk on the table? Then when do we use a milk-jug? The children should then repeat, "We use the milk-jug at tea-time and breakfast-time."

Now, Tommy, come here and take hold of this milk-jug. Which part of the jug is Tommy holding? The handle. The children should then repeat, "Tommy is holding the jug by the handle"; and afterwards repeat, "We should always hold the jug by the handle." Where do we put the milk? Inside. You come and show me the inside of the jug. Who can touch another part of the jug? Yes; and what part do you say you are touching? The outside. Then what do you call the part on which the jug stands? The bottom. Now I want you to tell me the different parts of the jug as I touch them. The teacher should then point out to the children that the top of the jug is not the same all round like the basin, but has a lip or kind of spout. The use of this should be made clear to the class.

Will you come here, Mary, and give me the basin? Is that right? Yes, quite right. How many of you have seen a basin before? Well, you have seen one at home. Was it like this one? No. What was the difference? It was larger. For what did your mother use it? For the pudding. Do you know what we call that basin? Are all pudding basins large? No, some are quite small. Well, Harry, what are you going to say? My father has a small one, and mother makes him a pudding in it for his dinner. There is a little boy who says he has seen a very large basin. Well, for what is it used? For washing our hands and faces. Yes, that is right; and we call such a basin a wash-hand basin. Now look at this one again. When does your mother use a basin like this? At tea-time and breakfast-time. For what does she use it? Yes, we call it a slop-basin.

Now tell me the different kinds of basins we have mentioned. Pudding basins, wash-hand basins, and slop basins.

Who can tell me the different parts of the basin? Outside, inside, bottom, and rim.

We have still something else on the table that we have not spoken about. What is it? You come and find it for me. How many things are you holding in your hand? What are they? A cup and a saucer. Now look at the cup first, and tell me some part of it? The inside. Yes. The outside, the handle. When do you use the handle? What is this part called? The rim or edge. Now look at the saucer, and tell me if it is like the cup. No, it is almost flat, not deep like the cup. What is the use of it? To stand the cup in. Why do you want a saucer to stand the cup in? To catch any tea, or coffee, or milk that may run over the side of the cup. Yes, if it were to fall on the cloth it might make the cloth dirty. When do we use a cup and saucer? At tea-time. When else? At breakfast-time. You must be very careful when you drink some tea to stand the cup down quite in the middle of the saucer, and not near the edge, for it is likely to turn over.

Now look at all these things on the table: milk-jug, slop basin, and cup and saucer. What colour are they? How do they feel? The children should then repeat, "They are all white. They are all smooth." If you were to drop any of these things what would happen? They would break. The children should then repeat, "They all break very easily. We must be careful when we use them." Do you know of what they are made? Yes, we call it china.

Some of you do not have cups and saucers because you are too little to take care of them. What do you drink your tea out of? A mug. And of what is your mug made? China. I know a little boy who had a pretty china mug, and he broke it. His mother bought him another, and he broke that; so then his mother bought him another one, but this one he could not break. Do you know of what it was made? Yes, it was made of tin. How many of you have tin mugs? Do you like them? Why? The children should then repeat, "We cannot break our tin mugs."

COFFEE.

Class—Children over Six.

Apparatus—Coffee-berries, picture of coffee-tree, tea-plant

I. **Description.**—The teacher, showing some ground coffee to the children, should ask them what it is. What can you say about it? It is of a brown colour. What else can you say? It is a powder. I dare say some of you have seen coffee quite different to this What was it like? It was like little berries. What has to be done to the berries to make them like this? They have to be ground. Let us look at these coffee berries. What can you tell me about them? They are hard and brown. What shape are they? Round on one side, and flat on the other. If you knock one, what happens to it? It breaks quite easily. Then we can say that the coffee-berries are brittle.

See, here is a picture of the coffee-tree. What plant did I show you last week? The tea-plant. Well, we will put them together. Now tell me what you can about the coffee-tree. It is much larger than the tea-plant. Look at the leaves; what can you say about them? They are green and glossy on the upper side. What do you mean by glossy? What kind of flower has it? The same colour as the tea-plant. What is that? White. Yes, and it has a very sweet scent or smell.

What does this look like? A cherry. Yes, and it is the fruit of the coffee-tree. It is red like the cherry, and the outside is soft like the cherry. Inside this soft part we find the coffee-seeds, or, as we call them, the coffee-berries. What do we find inside the cherry? The stone. Which part of the cherry do we use? The outside. Do we eat the stone? No; we throw it away. Well, with the coffee fruit we do just the opposite. We do not use the outside, but the inside. Which part of the tea-plant do we use? The leaves. Yes, but the leaves of the coffee-tree are not used. The children should then repeat, "We use the inside part of the coffee fruit—the seeds or berries."

Here is a berry that has come out of the fruit. Is it like the berries we grind into powder? No; it is of a light colour. Yes, and if you were to taste them, you would find they were different. Something, therefore, is done to the coffee-berries before we use them. Do any of you know what is done to them? Well, I will tell you. They are roasted. What do I mean by that? The berries are not roasted in front of the fire as the meat is, but they are put into a kind of saucepan, which keeps turning over and over to prevent the berries from getting burnt. After they have been roasted, what colour are they? Sometimes you see coffee-berries that are almost black. This is caused by their being roasted too much. What do we have to do to the berries before we can use them? Grind them. In what do we grind coffee? In a coffee-mill. Have you all a coffee-mill at home? Who grinds your coffee then? It is ground when you buy it? Where do you buy it? At the grocer's shop. Yes, and if you look at the grocer you will sometimes see him turning a handle. This is to grind his coffee. He has to grind a great deal, because people do not care to be troubled about grinding their own coffee.

II. **Uses.**—For what do we use coffee? When do we generally drink coffee? At breakfast. What do we have to do with this coffee to make it into a drink? Pour boiling water over it. How do we make tea? Pour boiling water over the leaves. In what do we make coffee? In a coffee-pot. Is it like the tea-pot? If you look inside a tea-pot you will notice a number of very small holes near the spout. Why do we not have one large hole? The large hole would let the tea-leaves through into our cups. Yes, and they would stop up the spout of the tea-pot. Now look at this coffee-pot. Has this a strainer? Why is that? Well, listen. The coffee is ground into a powder, and if it had a strainer like the tea-pot has, the grounds of the coffee would come through into our cups. What does your mother do? She puts the coffee into a very thin bag, and this keeps all the grounds in it. Do you know of what the bag is made? It is made of muslin. The teacher might explain that some coffee-pots have very fine metal strainers, and then the muslin bags are not used. What do we mix with the coffee before we drink it? Sugar and milk. Yes, and we generally have hot milk to put in the coffee because it makes it taste better. Do we put hot milk in tea?

III. **Summary.**—This should be written on the blackboard as the lesson proceeds, and afterwards reproduced by the children.

The coffee-tree grows much higher than the tea-plant. The leaves are green and glossy. The flower is white, and has a very sweet smell. The fruit is of a dark red colour, something like a cherry. The coffee-berries are found inside the fruit. These berries are roasted and then ground into coffee.

We pour boiling water over coffee, and then drink it with milk and sugar.

THE OSTRICH.

Class—Children over Six.

Apparatus—Picture of the ostrich, of the duck, and of the comparative sizes of animals; a feather, and egg if possible.

I. **Description.**—The picture of the ostrich to be placed before the children, then they should be asked to name it. A picture of the comparative sizes of birds should also be shown, so as to lead the children to discover that the ostrich is the largest of all birds; they might be told that it grows from six to eight feet high. To give the children some idea of this height, their attention should be called to some familiar object of the same height, *e.g.* the schoolroom door; or they might remember having had the idea in some previous lesson, *e.g.* the tea-plant is six feet high. Look at the head of the ostrich. Can you see any other bird here who has a head something like it? Yes, it is something like the duck's, its beak also is broad; but it is different from the duck in one thing. What has the duck on its head? Feathers. Well, you see the ostrich has very few feathers on its head. What part is this? What can you tell me about its neck? It also has very few feathers on it, and it is long. The children should then repeat, "The head and beak of the ostrich are something like those of the duck; it has very few feathers on its head and neck."

Now look at the eyes of the ostrich, and you will see that it has very long lashes, and that its brows are very thick, and hang over.

With what is the ostrich covered? Are they like the feathers of the duck, or of the hen? No, they are very large and loose, not packed closely together like those of the duck, or the hen. What colour are they? Black on the body. What are these? The wings. And this? The tail. What colour are the feathers here? They are white; sometimes there are some black mixed with the white. What would you say about the wings? (They should be compared with the wings of other birds.) They are small. Look at the legs of the ostrich. What would you say of them? They are long, and look very strong; they have no feathers on them. If you look at the foot you will see that that also looks very strong. How many toes has it? Only two. Are these both alike? No, one has a sharp claw, and the other has none.

II. **Habits and Food.**—The children should be told that the ostrich lives in very hot, sandy places, in countries a very long way from here. Do you know the name of the country in which we all live? Yes, it is England. Perhaps some of you have heard the names of some other countries? Yes, there is a little girl who has heard of Scotland, and another of Ireland, and another of America, etc., etc. Well, the ostrich does not live in any of these places, but in parts of Asia and Africa, and it lives in the hot, sandy parts. There is very little water there, and when the wind comes, it blows up this hot, fine sand. Would you like to live in a place like that? Do you like to be out in the street when the wind blows and it is very dusty? Why not? It blows us about, and the dust gets into our eyes. Well, how do you think the ostrich manages? What did you notice about its eyes? Well, these long lashes and its thick eyebrows help to keep the sand from getting into its eyes. Have you ever heard of another animal that lives in these hot, sandy places? Well, the camel has eyes something like those of the ostrich. Why is that? To keep the dust from getting into its eyes. The children should now be told that the ostrich eats grass, seeds, and any kind of vegetable. They will often go into a field and eat up all the corn, or anything else that is growing there. How do you think the farmer feels when he sees his field spoilt? What will he try to do? Catch the ostriches. If you try to catch a little bird, what does it do? It flies away. Do you know what the ostrich does when men try to catch it? No; it does not fly, but it runs very fast—faster than a horse can run. What has it that helps it run so fast? Long, strong legs? Yes; and it also uses its wings when it runs. What is the use of the wings to the sparrow? To help it to fly. The ostrich's wings do not help it to fly, but to run. The children might be told that the ostrich runs in a zigzag way (this to be explained) instead of going straight along as the horse does, and that when it is tired it buries its head in the sand.

The ostrich lives on grass, seeds, and vegetables. The teacher might then tell them that the ostrich can swallow almost anything, *e.g.* leather, wood, pieces of iron, etc.

III. **Uses.**—Tell me some of the uses of the hen and the duck. They both lay eggs. The ostrich also lays eggs, and these are good for food. Here is one. What can you tell me about it? It is very large. Do you think you could eat it for your breakfast? (If the teacher cannot get an egg of an ostrich to show the children, she might give an idea of its size by drawing it on the blackboard.) Do any of you keep hens at home? Where do you go to look for the eggs? In the nest. The ostrich does not make a nest, but scratches a hole in the sand and lays its egg in it. Look at this bird again: can you see any part of it that you think would be useful? Its feathers. Do you know what we call them? They are called ostrich feathers. What do we do with them? We trim hats and bonnets. Can we have many of them? No, they cost a great deal of money, especially the very long ones. Have you ever seen ostrich feathers used for anything else? They are used to put on funeral coaches and horses. What colour are these? Black.

What do we do with the flesh of the duck and the hen? Eat it. The flesh of the ostrich is eaten, and the people who eat it like it very much.

IV. **Summary.**—This should be written on the blackboard as the lesson proceeds, and reproduced by the children as a home lesson:—

The ostrich is the largest of all birds. Its head and beak are something like those of the duck. Its neck is long, and has very few feathers on it. It has long eyelashes, and thick, overhanging brows. The ostrich is covered with large, loose feathers. Its wings are very small. Its legs are long and strong. It has two toes, one of which has a sharp claw. The ostrich lives in hot, sandy places. It eats grass, seeds, and any kind of vegetable. The ostrich lays eggs, which are good for food. Its feathers are very useful. The flesh of the ostrich is eaten.

THE STORK.

Class—Children over Six.

Apparatus—Picture of a stork

I. **Description.**—The picture of the stork being placed before the class, the children should be asked to name it, and then led on to describe it.

What kind of head has this bird? Its head is rather small. But what of this? Its beak is very long and of a red colour. What about its neck? The stork has a very long neck. Can you tell me the name of an English bird with a long neck like the stork? Yes, the swan. Is the beak of the stork like the beak of the swan? No; the swan has a small beak. What kind of legs has the swan? Very short ones. Are the stork's the same? No; they are very long. The children should then repeat, "The stork has a long beak, a very long neck, and very long legs."

Now look at its body; what can you tell me about it? It is covered with nice white feathers. Are all the feathers white? No; the wings are quite black. And what about the size of the wings? The wings are very large indeed. especially when stretched.

II. **Habits and Food.**—The children should be told that these birds live in marshy places, where there is plenty of water and a great deal of soft mud. From this they would discover the use of the stork's long legs. If they had short legs their bodies would touch the mud and get wet and dirty, and they would not be able to stand in the water to watch for their food, and again, they might get stuck in the mud if they had short legs. Do you know what the stork finds to eat in these damp places? Well, I will tell you. There are always a great many small animals in such places, one of which I daresay some of you have seen. Have you not seen a frog? What does he do when you get near to him? Jumps away; and in the water he swims very quickly. Well, the stork is very fond of frogs, and easily catches them. He also eats snails, worms, serpents, lizards, and several other animals of this kind. Besides these the stork picks up all kinds of rubbish that it finds in the street, and thus helps to keep the streets clean. So you see they are very useful to the people who live in these places, and the people are very kind to storks, and punish the naughty boys who hurt them. If you were to go to one of the towns where the storks live you would see them walking in the street and not frightened at all. Why are they are not frightened? Because the people are very kind to them and treat them well. Sometimes you would see storks on the top of the houses. Do you know what they do there? Why they build their nests close to the chimney-pots. If you looked at one of the nests you would see it was made of sticks and grass, and I daresay inside you would see two or three eggs. These eggs are hatched, and then little birds come out. The old birds then teach the young ones to fly. By the time they are able to fly well, and are getting very strong, the weather is beginning to get too cold for them. Then a great number of storks all meet together, and afterwards they all fly away to a warmer country, and stop there until the cold weather has passed, and then they come back to the very same place. Do you not think that is very wonderful? To show the children how fond the stork is of its young, the teacher might tell them the story of the stork during the fire at Delft.

III. **Summary.**—This should be written on the blackboard as the lesson proceeds, and afterwards copied by the children, or written from memory.

The stork has a long beak, a very long neck, and very long legs. Its body is covered with white feathers. The wings are very large, and covered with black feathers.

The stork lives in damp places, and eats frogs, snails, worms, serpents, and lizards.

The stork is very useful in eating all kinds of rubbish.

AN EGG.

Class—Children under Six.

Apparatus—A cooked and uncooked egg; a ball and a lemon

I. **Description.**—The teacher, placing an egg in front of the children, should ask them to describe it. It is of a white colour. It is round. Here is something that is round; what is its name? A ball. Is the egg round like this ball? No. Can you tell me any difference? Yes; the egg is longer one way than it is the other. The teacher should then, with pieces of tape of string, show the children the difference in size between the piece of tape passed round the breadth of the egg and the piece passed round the length of it, Can you tell me something that is of the same shape as the egg? Yes; a lemon is something like an egg in shape. We call things that are thus shaped oval. What shape is the lemon?

The children should then repeat, "An egg is white and of an oval shape." Now, Mary, come and feel this egg, and tell the others what you notice about it. It is smooth and hard. What have I done now? Broken the egg. I did not have much trouble in breaking it, and therefore you see it breaks easily if you knock it.

What have I in my hand? A part of the shell. And where is the egg? In the basin. Which part did you see before I broke the egg? The shell. What can you say about the shell? It is white, hard, and smooth. Yes, but something else. What happened when I knocked the egg? It broke easily. Well, then? The shell is brittle. And what part of the egg is the shell? The outside.

Now look inside the shell and tell me what you see. A thin skin. Each of you say, "The shell has a thin skin inside it." Now look at this basin; what do you see there? Something round and yellow. Where is that? In the middle. What is all round this? Something that is clear and shining. Yes; and you see we can pour it out, although it is rather thick. If you feel it you will notice that it is very sticky. The yellow part in the middle is called the yolk of the egg. The teacher then, taking up a boiled egg, should proceed. See, here is another egg. What have I done to the shell? Cracked it. Yes, and you see I am taking the shell off. Now, what have I underneath? Something white. If I take away the white part, what do you see? The yellow part or the yolk. What do you think has been done to this egg to make it so different to the first one? It has been boiled. Now look at both the eggs and tell me the difference between them. The clear part of the first is white now it is cooked. It is also hard, but before we could pour it out. Yes, we call this part the "white" of the egg. What about the other parts? The shell and the yolk seem the same in both eggs. Now tell me the different parts of the egg. The shell, the inside skin, the yolk, and the white.

II. **Uses.**—For what do we use eggs? We eat them. What has to be done to them before they are eaten? They have to be cooked. How are they cooked? Sometimes they are boiled and sometimes fried. What does your mother do before she fries the eggs? She breaks the shells off and puts them into the frying-pan without the shells. Does your mother take the shells off the eggs when she boils them? Sometimes she does. Yes, when we boil eggs without their shells we say they are "poached" eggs. What other use do we make of eggs? They are used to put into puddings and cakes.

Then I think some of you have seen your mothers use the white of an egg to join things together.

III. **Where obtained.**—Where do we get eggs? From the shops. Yes; but where do the people in the shops get them? From where do they first come? The hens lay them. You can tell me what the hen does when she lays an egg? She makes a great noise. Yes, as if she was trying to tell us what she had done. You can tell me some other birds that lay eggs for us to eat. Yes, and all the birds lay eggs, but we do not eat them. Do we eat the eggs directly they are laid? We do if we can get them. What do we call them? New laid eggs. They cost more money when they are just laid. There are not enough hens in our country to lay eggs for us, so we get a great many from countries a long way off. These eggs are sent in large boxes, and by the time we get them they are not new laid eggs. Can you tell me why?

IV. **Summary.**—This should consist of simple words, and should be written on the blackboard during the progress of the lesson.

The parts of an egg are—the shell, the inside skin, the white, and the yolk.

Eggs are used for food, and for making puddings and cakes. All birds lay eggs. We eat the eggs of hens and ducks.

SUGAR.

CLASS—CHILDREN OVER SIX.

Apparatus—Moist and loaf sugar, flour, sand; picture of plant and specimen of cane

I. **Qualities.**—Place some moist sugar in front of the children, and ask them what it is. Tell me something about this sugar. It is brown. See, here is something brown (teacher showing a stone); what is the difference between this and the sugar? It is in one piece, while the sugar is not. The teacher should then show the children some flour, so as to let them notice that the sugar is not a powder, but that it consists of little pieces. What do we call these tiny pieces? Yes, we call them little grains. And you will find out, if you try to break these little grains, that they are very hard. Do you know anything else like this sugar? Sand and salt. We say that all these things are *granulous.* Is the flour granulous? No; it is a powder. What can you say of sugar? It is granulous. You told me that the sugar was like sand. Now I have some sugar and sand here. Which is the sugar? How do you know? Yes, if you look at the sugar you see it is much brighter. Some of the little grains are very bright indeed. We say they sparkle, and because sugar is like this it is said to be *sparkling.* Now you have all tasted sugar. What kind of taste has it? It has a very *sweet* taste. If you put some sugar into the water, what happens to it? It all melts. Yes, we say it dissolves, and because it dissolves or melts in water, we say it is *soluble.* Tell me some other things that are soluble. Have you ever seen your mother make some sugar very hot? Yes, when she wants to make the gravy for dinner. What does she do? She puts the sugar in a spoon, and then puts the spoon into the fire. What happens to the sugar? It melts and sometimes it catches light. Then what do you see? A flame. You see, then, that sugar melts when it is made hot. What do we say of things that do this? They are *fusible.* Name other things that are fusible. Then you said it burns with a flame. What do we say of those things that burn with a flame? They are *inflammable.* Tell me some other things that are inflammable.

The children should now repeat from the blackboard, "Sugar is brown, granulous, sweet, soluble, fusible, and inflammable," and at the same time they should be asked to name other things possessing the qualities named.

Is all sugar brown like this? No; sometimes it is not so dark. What do we call this kind of sugar? Moist sugar. Then there is another kind of sugar; what is it called? Lump or loaf sugar. Is it like moist sugar? No; it is quite white, and in large pieces. Yes, and I daresay you have seen the grocer chopping it up. It is in very large pieces at first. These large pieces are called sugar-loaves. The teacher should draw the shape on the board, or show them the large wooden cone.

II. **Uses.**—For what do we use sugar? To put in our tea, coffee, puddings, etc. Why do we put it in these things? To make them sweet. Then we say sugar is used for sweetening our food.

Now I am sure all little boys and girls can tell me another use of sugar. It is used to make sweets.

Then there is something your mother gives you on your bread that is made from sugar. Do you know what it is? Yes; treacle. Yes, and then sugar is used to make jam. Do you know of what jam is made? Of plums, currants, etc. Yes; and then sugar is put in to make the jam sweet, and also to keep the fruit good. Sometimes your mothers do not put enough sugar with the fruit, and then when the jar is opened they find the jam is going bad.

III. **Where obtained.**—The teacher must tell the children that sugar is the juice of a plant called the sugar-cane. A picture of the sugar-cane should be shown to the class, and if possible a piece of the cane. The children might be told that the sugar-cane grows up high like tall grass, and they might compare it with the wheat and other corn plants.

Men put these canes under heavy rollers in order to squeeze out all the juice. This juice is afterwards made into sugar for us to use. The juice that is left in making sugar is called treacle. The teacher, without entering into details, should tell the children that sugar is obtained from the maple-tree, beetroot, etc.

IV. **Summary.**—Sugar is brown, gran-u-lous, sol-u-ble, fu-si-ble, and in-flam-ma-ble.

Sugar is used for sweet-en-ing our food.

Sugar is used in making sweets and jam.

Sugar is the juice of the sugar-cane. It is also made from the maple and from beetroot.

THE HERRING.

CLASS—CHILDREN OVER SIX.

Apparatus—A fresh herring and a cured one

I. **Habits.**—Now, children, look at this fish. Can you tell me its name? Yes; it is a herring. Do you know where the herring lives? In the water. Do you see herrings in the river? The teacher should make use of any stream in the district, and afterwards tell the children that the herrings live in the sea, and then explain the difference between river and sea water. What does the herring do in the sea? It swims about. Yes, and it swims very quickly. A great many of them live together, and because of this we say they are found in shoals. What do we say when there are a large number of sheep together? We say, a flock of sheep. What do you call a number of cows? A herd of cows. The children should then repeat, "Herrings are found in shoals."

What do you think the herring finds to eat? Yes; it eats the very smallest fishes there are, and also the eggs of other fish.

The children should then repeat, "Herrings live in the water. They swim very quickly. They are found in shoals."

II. **Description.**—Now, look at this herring, and tell me about its size. The teacher might compare the length with the ruler or pointer, or the slates of the children, and then tell them it is about ten to twelve inches long. Now look at its eyes; are they not very large? If we put our heads in the water, what do we do to our eyes? We shut them. How do we shut them? With our eyelids; they drop down and cover up our eyes. Why do you cover your eyes in the water? Because the water would make them smart. Look at this fish. It has no eyelids. It lives in the water, and therefore wants to see; and hence its eyes are made so that they do not need eyelids to cover them. If you look very carefully, you will notice that there is a clear piece of skin over its eyes, and this it can see through. What do you say of those things that you can see through? They are transparent. Then the skin over the herring's eyes is transparent. Name other things that are transparent. All of you say, "The eyes of the herring are large and covered with a transparent skin."

What can you say of its body? It is like silver. What do you mean by that? It is very bright and shines like silver. Yes, we say it is silvery. But it is not all of the same colour as silver. No; its back is of a dark green colour. How is its body covered? It is covered with a great many little pieces. These little pieces are called scales. These little scales are very thin, light, and waterproof. What do I mean by waterproof? Name other things that are waterproof. The teacher should then point out how they are laid one upon the other, and that if rubbed downwards—*i.e.* from the head to the tail—they are pressed closer together. The advantage and use of this arrangement might be pointed out. Now, see what this fish has on its back. Do you know what we call these? They are fins. Now let us look at this herring and see how many fins it has. Here is one on the back, then there is one on each side behind the head, and one on each side of the underpart of the fish. How many has it altogether? Five. Can you tell me the use of them? They help the fish to swim. Who has seen a fish swimming? What did you notice about its fins? They keep on moving. The children should then repeat, "The fins help the herring to swim." But the herring has something else that helps it to swim? Yes, its tail. Look at its tail; what can you tell me about it? We say it is forked. The herring uses its tail to guide it in the right direction. Have you ever been in a boat? How is the boat moved along? With pieces of wood called oars. Men put these into the water and then pull them through it. Then there is somebody who sits at the end of the boat. What does he do? He steers the boat. What does that mean? He guides it. How does he do this? He pulls a string. What is there at the end of the string? The rudder. Well, the tail of the fish is like a rudder. The children should then repeat, "The tail is useful to guide the fish in the water." Now look at the herring's head. What do you see here? Yes, these are the gills. Do you see all these little pieces like stiff hairs? They look very much like fringe. I daresay you would like to know the use of them. The teacher should then explain the act of breathing to the children. They might all be told to take a long breath, and notice how they open their mouths, etc. Well, the fish when he wants to breathe uses his gills. The fringe keeps the water out. Where did you say the gills were? How many gills are there? The herring cannot live out of the water because its gills would get dry, and then he would not be able to breathe. The children should then repeat, "The herring breathes by means of its gills. These gills are on each side of its head."

III. **Uses.**—What do we do with the herring? We use it for food. The teacher showing the fresh herring should tell the children that they are often eaten like this, and are then called "*Fresh herrings.*" How do you generally see them in the shops? The children would most likely point to the cured herring. Yes, when they are like this they are called *smoked* or *dry herrings.* Can you tell me another name for them? Yes; we call them "*bloaters.*" It is a very good thing for us that the herring can be so easily smoked or made like this one. Do you know why? We are able to keep them a long time after they are caught and they do not go bad, and hence we can always get these kind of herrings. Some day you will learn how the herrings are thus cured.

Do you know how we get the herrings from the sea? Men catch them. What are these men called? Fishermen. Do you know how they catch them? The fishermen go out in large boats or ships and let down into the water very large nets. When these nets are full of fish they are pulled into the boats and brought home.

Herrings are also eaten by some of the large fish in the sea, and also by the birds that fly about over the sea. These birds are called sea-fowl.

Summary.—The herring lives in the sea. A great many of them are always found together.

It lives upon very tiny fishes and eggs of fish.

Its eyes are large and have no eyelids. Its body is bright and silvery, and its back is of a dark-green colour. It is covered with scales.

Its fins help it to swim, and its tail is useful to guide it.

The gills are on each side of the head; it breathes by means of its gills.

The herring is useful for food.

A MATCH.

CLASS—CHILDREN UNDER SIX.

Apparatus: A box of matches, a candle, a tin box of matches, a box of safety matches.

I. **Description.**—The teacher should show the children a match and ask them what it is. Where have you seen one before? For what do we use matches? The children should then repeat, "Matches are very useful for lighting."

Now, children, to what am I pointing? The end. Who can show me another end? How many ends has a match? All of you repeat, "The match has two ends." Are they both alike? No, one has something on it. All of you repeat, "One end of the match has something on it." Of what is this part made? Of wood. Tell me all you can about this piece of wood. It is white and hard. The teacher, holding a match in the flame of the candle, should ask, What can you tell me about the match now? It burns with a flame. Which end of the match did I put into the candle? The end that had something on it. Yes; that burns first, and then the wood afterwards. What can you say of this at the end? It is of a dark colour. Sometimes it is red. The teacher might carefully scrape off this substance, so as to show the children that it was on the wood.

Now let us see the use of these parts. When do we use matches? When we want to get a light. What do you do with the match? Strike it. Where do you strike it? Against anything. Some matches, if you strike them against a piece of wood, stone, iron, etc. will light directly; but there are some others that will only light when you strike them in one place. Do you know where that is? On the side of the box. Which end of the match do you strike? The end that has something on it. Sometimes your mother strikes a match and no light comes. Do you know why that is? Because it has been used before, and all the stuff at the end is rubbed off. Now you can tell me the use of this substance at the end of the wood. It is to make a light. What, then, is the use of the wood? It is to hold in our fingers. Yes; and it also lights, and this makes the match last longer. When do we throw the match away? Before it has burnt quite to the end. Why do we not let it burn out in our hand? Who only ought to touch matches? Why? Because little girls and boys are not careful enough to hold such things; they might burn their fingers, or throw the match on to something that would catch fire. The teacher might here tell a story of a child who touched some matches and was very much burnt.

Where do you buy matches? At the oil-shop. For what do you ask? A box of matches. Yes, they are always put in boxes. Here is a box of matches. Who can open it for me? Here is another box; who can open this one? How did you open it? Yes, you lift up the lid. Where is the lid of the first box? It has no lid, but it has something that goes all round the box. You see, then, to open this box you do not open the top, but push the box out of its case. Which is the case? This is much better, for if you drop the box the matches do not come out. Suppose the matches were to fall out on the floor, then someone coming by would tread on them, and they might catch light, and then what might happen? The match-boxes that have lids have to be made much stronger, and your mother would have to pay more money if she wanted boxes like this. Now we will look at this match-box again. What has it on the side. Yes; that is put there for us to strike the matches. There is one thing that you must always be careful about, and that is not to let your little baby brothers and sisters get hold of the matches. Do you know what babies do with all the things they get hold of? Well, if ever you see a baby putting a match into its mouth, you must be sure to take it away, for it would hurt the baby very much, and make it very ill, and for the same reason you must never put matches in your own mouths.

III. **Summary.**—Matches are very useful for lighting. Matches are made of wood, with something at one end to make them light quickly.

Children should not touch matches.

These sentences should be repeated by the children both during and at the end of the lesson.

This lesson could be readily made more advanced, so as to suit the upper division of the school, by introducing the following matter into it :—

(*a*) Some of you told me that one end of the match had something on it, and now we must learn of what this is made. It is made chiefly of melted sulphur, with a little glue, a little red-lead, and some other things. The teacher should show these substances to the children.

The wood is cut into little sticks by means of a machine. These sticks are as long as two matches. A man then puts a great many of these sticks (about 1,500) into a frame, and then dips first one side and then the other into the melted mixture. The teacher should here question the children as to the composition of this mixture. These long matches are dried, and afterwards cut into two. Then they are packed in boxes, each box containing a certain number. How do the men know when there are enough matches in a box? They have to count them.

The teacher might then point out to the children that the people who made the matches were often very ill, because of something used in making them. Now, however, men have found out something else to mix with the sulphur which makes good matches and does not make people ill.

(*b*) Some of you told me that there are some matches that will only light on the box, but I suppose you cannot tell me their name. Yes, that is right; they are called safety matches. Why? Because if you happen to drop them, and they are trodden on, they do not light. If you put them in your pocket and let them rub against each other they will not catch fire. I will tell why they will not light anywhere but on the box. It is because part of the mixture we have spoken about is put on the little sticks, and the other part is put on the box, and we cannot get a light until the two parts are together. The teacher might then tell the children how people used to manage before the way to make matches was found out.

RICE.

Class—Children over Six.

Apparatus—Some rice and corn (wheat and barley); picture of rice plant; ears of wheat and barley.

I. **Description.**—Some rice should be shown to the children, and they should be asked to describe it. It consists of a number of little pieces. What do you call these little pieces? What have you seen before that is made up of little grains? What is the difference between the grains of rice and the grains of sugar? Tell me some other things in little grains. Wheat, oats, barley, etc.

Let us look at one of these grains of rice. What can you tell me about it? It is white and very hard, and of an oval shape. What else do you know that is of an oval shape? An egg. The children should then repeat, "A grain of rice is white, hard, and oval in shape."

II. **Whence obtained.**—We get rice from a plant called the rice plant. See, here is a picture of it. Have you ever seen a plant anything like this? Yes, it is very much like the corn plant. Who can tell me which corn plant it is like? It is something like barley. Do you know how barley differs from wheat and oats? The seed part or the ears are covered with long hair-like pieces. Yes, we call that the *beard*, and I daresay you have heard people speaking about *bearded* barley. The teacher, then directing the attention of the children to the picture of the plant, should point out the arrangement of the ear. The seeds are contained in it. The ear grows out of the stem. The children should have specimens of the ear and stalk of the corn plants shown them. The children's attention should next be directed to the stem, and a comparison should be made with some familiar object about as high as the rice plant. The children should then repeat, "The rice plant grows to a height of six feet." The teacher would have to tell the children that the rice plant grows in very damp, muddy places. There are plenty of such places in England, but still, the rice plant will not grow here. This is because it wants something else to make it grow. It will only grow in very hot countries. In the parts where it grows the land is covered with water for some time, then the water runs off the land; and what do you think the land is like? It is like mud. Yes, that is the best thing for the rice to grow in. There is one place where the rice seeds are thrown into the water. I suppose if you were to see people sowing seeds like this, you would think they were very silly. When the water goes away the men go and look after the rice, and they find it has already begun to grow. When it has grown high, and the ears are ripe, they cut it down just in the same way as the corn is cut in our country. They use a knife, however, that is rather different. The long steel part is not sharp like those our farmers use, but is like a saw; that is, all cut into teeth.

The men have to cut the rice down very quickly, and get it away before the water comes back again. If the water were to come before it was cut down, it would be spoilt, and then you know it would not be any good.

Can you tell me which part of the rice plant we eat? Yes, the seeds. When you get wheat from the field, and are going to eat it, what do you first do? Pull off all the skins. These skins are called husks. Well, the rice seeds are covered with husks, and before we use the rice they have to be taken off. This is generally done before the rice is sent to England. The children should then repeat, "We eat the seeds of the rice plant after the husks are taken off."

III. **Uses.**—For what do we use rice? For eating. What must be done to it before you can eat it? It must be cooked, so as to make it soft. How is it cooked? Sometimes it is boiled, and sometimes it is made into puddings. What is put with the rice when it is made into puddings? Eggs, milk, and sugar.

Sometimes it is made into cakes. Do we use the same rice for puddings and cakes? No, the rice for cakes has been ground into a powder. What is it like then. It is like flour. Yes, and we call it "ground" rice.

Of what do we make bread? Of flour. Can you tell me of what flour is made? Yes, wheat is ground, and then it is called flour, and this flour is made into bread. Well, in some countries the people grind the rice into flour, and use it for making bread. I do not think you would like this bread; it is not so nice as the bread made of "wheat" flour, and very soon gets very hard and dry. The children should then repeat, "Some people use ground rice to make bread." Do you know what your mother uses when she wants to make your collars and dresses stiff? She uses starch. A great deal of starch is made from rice. The children should then repeat, "Rice is used for making starch."

Do you remember the long stalks of the rice plant? Now these are very useful for making hats and bonnets. What kind of hats do we call these? Straw hats. These hats are quite white. Do you see this beautiful thin paper? It is called rice paper, and is so called because it is made from rice.

IV. **Summary.**—This should consist of very simple words, and should be written on the board as the lesson proceeds.

Rice is white and hard. It grows in hot, muddy places.

The plant is like our corn plants. Rice is used for food.

In some places it is made into bread. Starch and paper are made from rice.

THE APPLE AND PEAR.

Class—Children under Six.

Apparatus—Apple and pear; pictures of the apple and pear trees

I. **Description.**—An apple should be placed before the children, and after they have named it, they should be asked to describe it. It is round and green. Are all apples green? No, some are red, some brown, some yellow. When are apples of these colours? When they are ripe. Feel this apple. What can you say about it? It is smooth, and rather hard. What do you call this part of the apple? The stalk. Of what use is it? The apple is joined to the tree by it. Do you know what this is called? Yes, it is the eye of the apple. Now see what I have done. Cut the apple in half. What can you say of this? It is the inside of the apple. Is it green like the outside? No, it is of a very pale yellow. That is right; some apples are quite white inside. What part is green? The skin. Where is the skin? On the outside of the apple. Do you notice any other difference between the inside and outside of the apple? Yes, the outside is dry, and the inside is wet. What makes the inside wet? The juice.

Now I want you to look quite in the middle of this half of the apple. Do you know what there is there? Yes, some pieces of skin, and some pips. What do we call this part of the apple? The core. What are the pips like? They are like seeds. What colour are they? They are dark brown. Yes, they are the seeds, and when they are brown, the apples are ripe. You have all tasted apples. Can you tell me what kind of taste they have? A nice sweet taste. Always? No, sometimes they taste sour. When is this? When they are not ripe. There are some apples that are never sweet, not even when they are ripe. They are called cooking apples.

The children should then be asked to name the different parts of an apple. The skin, the stalk, the eye, the inside, the juice, the core, and the pips.

The teacher should now show a pear to the children, and ask them to name it. What can you say about the pear, if you compare it with the apple? It is not as round as the apple is; it is longer, and comes to a point. Which end comes to a point? The end where the stalk is. What is at the thick end of the pear? The eye. What colour is it? Brown; some are green and some yellow. What had the apple on the outside? A skin. Well, if I cut this pear, you will see that it also has a skin. What difference do you notice about the inside? It is much softer than the apple. The children should then repeat, "The inside of the pear is softer than that of the apple, and is more juicy."

What did we find in the centre of the apple? The core. Now look at the pear; is there a core in it? Yes, and there are pips there, but they are quite black. Do the apple and pear taste the same? No, they both have a sweet taste, but they are very different.

II. **Whence obtained.**—From where do we get apples and pears? From trees in the garden. Do you know what kind of trees they are? They are generally large trees, though you will often see small ones with very nice fruit on them. What time of the year do we get apples and pears? If you were to watch an apple-tree you would see that all the winter-time the tree was quite bare and looked as if it were dead. Then when the weather begins to get warm, a great many pretty flowers are seen all over the tree, and at the same time green leaves are beginning to come. Then you would see that when these flowers fade away very small apples have come. These get larger and larger, and the green leaves also get large. Then when summer comes, and the nice warm weather, these apples get ripe, and instead of being green they become red, brown, etc. Sometimes the wind blows the apples off the tree and we are able to pick them up. It would not do for us to wait for the wind to blow all the apples and pears off the trees, for when they fall they get knocked and soon go bad. Men have to pick them. They get ladders and put them against the thick branches, and pick the apples off, and put them in baskets. When they are picked like this they keep a long time. Sometimes there are a great many trees, and the men either shake the apples off, or use long sticks and beat the trees, and this knocks all the apples down. Women and children then pick them up and put them in baskets.

When there are a great many trees in a garden we call it an orchard.

III. **Uses.**—For what do we use apples? For eating. What else? They are put into puddings and pies. Sometimes they are made into jam and jelly. Pears are also used for eating. Do we make puddings and pies of pears? Not in this country.

IV. **Summary.**—An apple is round, and of different colours. The parts of the apple and pear are—the stalk, the eye, the skin, the inside, the juice, the core, and the pips. They grow on trees. They are used for eating. Apples are made into puddings, pies, and jelly.

LEATHER.

Class—Children over Six.

Apparatus—Some pieces of leather and skin, a slate, duster, and some water.

I. **Qualities.**—Some leather should be shown to the children, and they should be asked to say what they can about it; by looking at it they will see that it is of a brown colour. The teacher, bending a piece of leather, should ask, What am I doing? Bending the leather. Tell me some other things that you can bend? What do we say of all these things? They are flexible. The children should now repeat, "Leather is flexible."

Now, Mary, I want you to come and hold this piece of leather in one hand, and this slate in the other. You see they are both about the same size, but what can you tell me about the weight? The slate is heavier than the leather. We say leather is light. The children should repeat this. What have I in my hand now? A duster. What am I doing? Pouring some water on it. What do you notice about that water? It has gone through the duster; there is no water left on the top of it, where it was all poured. Watch again. What am I doing now? Pouring some water on the leather. What do you notice this time? The water is still on the leather; it does not run through. Tell me some other things that will not let water through? Slate, china, glass, etc.

What do we say of these things? They are waterproof. The children should then repeat, "Leather is waterproof."

For what do we use leather? For making boots and shoes. Yes, this is one of the great uses of leather. Why do we not use calico, cloth, or even felt for our boots? Yes, they would very soon wear into holes. Because leather lasts a long time we say it is durable. Why do we say leather is durable?

II. **Uses.**—You have already told me one use of leather. What is it? For making boots and shoes. Can you tell me anything else that is made of leather? Bags, straps, harness, gloves, aprons, etc. You see leather is used for making a great many things. We say it is very useful. Can you tell me why it is so useful for making boots and shoes? Let us read from the blackboard all we found out about leather, and then think which of these qualities make it useful for making boots. The first quality is flexible. What does that mean? Do we need leather to be flexible in order to make boots of it? Yes, it is very much better to have something that will bend than anything quite stiff. When we move our feet our boots bend a little, too; this makes them comfortable, and keeps them from hurting our feet: sometimes your boots hurt your feet, but that is when you have made them very wet, and then dried them too quickly. What does this do to your boots? Makes them very hard and stiff. What must you do to your boots to make them soft again? Grease them. Yes, then they become flexible again, and do not hurt you when you wear them. Now, what is the next quality? Light. Do we like our boots light? Why do we not like boots made of something heavy? They would make us very tired. The next quality is waterproof. What does that mean? Do we need our boots to be waterproof? Why? Because we sometimes have to go out in the rain, and our feet would get wet if our boots were not waterproof, Sometimes your boots do let the water through. When is that? When they are wearing out. What has to be done to them then? They have to be mended, or else we must have new ones.

Now, there is still one more quality that makes leather so useful for boots. What is that? It is durable. What does this mean? The children should now repeat, "Leather is useful for making boots and shoes, because it is flexible, waterproof, light, and durable."

III. **Whence obtained.**—Can anyone tell me where we get leather? Well, I will tell you; it is made from the skins of different animals. You can tell me some—the horse, cow, goat, etc. The children should now repeat, "Leather is made from the skins of animals."

Now, I want you for a moment to look at your own skin: touch the skin of your hands, and of your face. If you run fast in the summer-time, how do you feel? Very hot. What do you sometimes see on your face and hands when you are very hot? Little drops of water. What do we call this? Perspiration. Where does it come from? From under the skin. How does it get outside the skin? It comes through. Yes, there are very little holes in the skin called pores, and it is through these that the perspiration comes. All animals' skins are full of these little pores like yours. I told you leather is made from skins—What is the difference between the skin and the leather? The skin lets water through—it is porous; and the leather will not let water through—it is waterproof. Would you like the skin to be made into boots? Why not? Something has to be done to the skins to make them waterproof before they are made into leather.

IV. **Summary.**—This should be written on the blackboard as the lesson proceeds:—

Leather is of a brown colour; it is flex-i-ble, light, wat-er-proof, and du-ra-ble.

Leather is used for making boots and shoes, bags, straps, har-ness, aprons, etc.

Leather is made from the skins of animals.

THE SWALLOW.

CLASS—CHILDREN OVER SIX.

Apparatus—Stuffed specimen of swallow; picture of several other birds for comparison

I. **Description.**—The stuffed specimen of the swallow and the above-mentioned picture should be placed before the children, so that the description of the swallow can be obtained by comparison. What kind of body has the swallow? It has a long, slender body. With what is it covered? Feathers. If you feel these feathers, what can you say of them? They feel soft, smooth, and thick. What do you mean by saying they feel thick? Feel this one; does that feel thick? Oh, no. Well then? The feathers are close together, and there are a great many of them, and that makes them feel thick. If you look at them, what would you say of them? They are of a grey colour. What do you say, Mary? Rather a dirty-grey. And you, Harry? Yes; the feathers are of a bluish-grey. What else do you see? The top of the head is of a reddish-brown and the tail is black. Now look again at the feathers; what else can you tell me? They are glossy. What can you tell me about the swallow's tail? It is very broad and divided. Yes; because it is thus divided we say the swallow's tail is forked. Now look how wide it can open its mouth. What can you say of its legs? They are short and very thin. What do you see on its toes? Claws. What can you tell me about them? They are long and curved.

II. **Habits and Food.**—Where do you generally see swallows? Flying about in the air. Yes; it is getting its food while it is doing this. What do you think it is able to find in the air? Flies. Yes, and other small insects. The children should then repeat, "The swallow lives on flies and other small insects."

The teacher might here point out to the children that, in fine weather, the insects fly high in the air and the swallows do the same. In damp weather the insects come lower down, and you will see the swallows flying close to the ground. So, you see, if you watch the swallow you will be able to tell what kind of weather we are going to have. When does the swallow fly high in the air? For what does it do this? Why does the swallow fly close to the ground in damp weather? What part of the swallow enables it to fly so well and for so long a time? Its long, strong wings. You remember you told me that it had a very wide mouth, and if you look at the swallow when it is flying you will see that its mouth is open; and its mouth is sticky, and the flies are thus easily caught. What kind of legs did you say the swallow had? Short and slender ones. Why does it not have strong legs? Because it does not need them. That is right; the swallow does not stand to get its food. Tell me a bird that stands to eat its food? The sparrow, the robin. And now a large one? A hen.

You have told me that the swallow lives on insects and flies which it catches in the air. Are these things always to be found in the air? When are they there? In the warm weather. Yes; when do we have warm weather? In the summer. What kind of weather do we have in the winter? Cold weather. Do you see the insects and flies in the winter? What do the swallows do then for food? If you look about you, you will notice that you never see swallows in the winter-time. Where do they go? Well, I will tell you. As soon as the weather begins to get cold, these birds fly away from us and go to a warmer country. You know that in our country the weather is cold in winter, but there are some countries where the weather is warm then. What do the swallows do? They fly away to warmer countries. When do they do this? When our winter is coming. And when do they come back to us? When the warm weather is coming again. Do you not think it is very wonderful that these little birds find their way back to us from countries such a long way off beyond the wide sea? And you must remember that they not only come back to the same country, but to the same places where they left their nests; and should they find their nests gone they seem to be very sorry and in great trouble. I hope you will not be unkind when you see a swallow's nest and knock it down. Would you like to know something about the swallow's nest? It is generally made of mud or clay, something the shape of a cup, and it is lined inside with soft grass, feathers, wool, and other things. Why does the swallow put these soft things inside its nest? To make it soft and warm. Why does it want it soft and warm? It lays its eggs in the nest, and sits on them and keeps them warm until the little birds come out of the shell. These little birds have hardly any feathers and cannot fly; so you see they want a nice warm house to live in. When these young birds grow up they will then make nests for themselves. (It would be well for the teacher to have a good model of a nest.) Have you ever seen a swallow's nest? Where did you see it? Under the roof of a house. Yes, the swallow likes to build its nest there. Sometimes the swallow builds its nest in the chimney. Why does not the nest get smoked? Because in the warm weather we do not have fires in the grate, and therefore there is no smoke to go through the chimney.

III. **Summary.**—This should be written on the blackboard as the lesson proceeds, and should afterwards be copied by the children or written from memory.

The swallow has a long slender body, which is covered with thick, soft, smooth, glossy feathers.

Its wings are very long and strong.

Its tail is broad and forked, and of a black colour.

It has a wide mouth covered with something sticky.

Its claws are long and curved.

The swallow lives on insects and small flies, which it catches while flying.

SPONGE.

CLASS—CHILDREN OVER SIX.

Apparatus:—Piece of sponge; basin of water; a piece of wood.

I. **Qualities.**—A piece of sponge to be placed before the children, who should be asked what it is. What can you tell me about the sponge? It is of a brown colour; it is full of little holes. Do you know what we call these little holes? Yes, they are called pores. Can you tell me anything else that is full of pores? What do we say of all these things? They are porous. The children should repeat, "Sponge is porous."

Now tell me what I have done. Put the sponge into some water. When I lift the sponge out of the basin, what do you notice? The basin is empty. Where is the water? In the sponge. What does the sponge do when you put it into the water? Soaks it up. Name some other things that will soak up water? Blotting-paper, flannel, bread, etc. What do we say of all these things because they soak up water? They are absorbent. The class should now repeat, "Sponge is absorbent."

Now, when I squeeze the sponge, what happens? The water runs out into the basin again. Mary, will you come here and feel this sponge? Now put it into the water again. Now take it and hold it up. What difference do you notice? It is much heavier. What makes it so heavy? The water it has soaked up. How does the sponge feel? Soft. Does it always feel soft like this? No, if you let the sponge get dry, it gets hard; but you can very soon make it soft again. Do you know how? Yes, by putting it in some water.

What have I in my hand? A piece of sponge. And in this hand? A piece of wood. You see they are both the same size? The teacher, taking up the sponge and squeezing it in her hand, says, What can you tell me about the size of the sponge now? It is very much smaller. The teacher taking up the wood, and squeezing it in her hand, says, What am I doing now? Squeezing the wood. What can you say about the size of it? It is not altered. You cannot make it small like you can sponge. Now look at the sponge again. What happens directly I open my hand? The sponge springs back to its large size again. Do you know anything else like this? What is this? Elastic. What have I done to it? Stretched it. When I leave go, what happens? It returns to its place. You see that is like the sponge, only you press the sponge and you stretch the elastic; but in what are they alike? Directly you leave go of them they return to their proper size again. Do you know what we say of those things that are like sponge? We say they are elastic. The children should now repeat, "Sponge is elastic."

II. **Uses.**—Now, children, for what do we use sponge? For washing ourselves. Why do we like sponge to wash with? Because it is so soft, and takes up a lot of water. Have you ever seen sponge used for anything else? Yes, you may sometimes see men cleaning cabs, carts, and carriages with sponge, and your mother also uses it to clean windows. Is this sponge like that we use to wash ourselves with? No, it is not so soft, and it is coarse; you would not like to use it for washing your face.

III. **Where found.**—Children to be asked if they know where sponge is found. If they do not know, tell them it is found in the sea, growing on rocks and plants. Men go into the sea and pick the sponge from the rocks. Would you like to go under the water to get the sponge? No; if you were to try to do it, you would be drowned. The men who go down have something on them, so that they can breathe under the water. They are called divers. They do not stop under the water long. They go down and come up very quickly with some sponge; then they go down again for some more.

IV. **Summary.**—This should be written on the blackboard as the lesson proceeds:—

Sponge is of a brown colour; it is por-ous, ab-sorb-ent, soft, and e-las-tic.

Sponge is useful for washing our-selves; it is also used to wash windows, cabs, carriages, etc.

Sponge is found in the sea.

HOW CHILDREN MAY BE USEFUL.

Class—The Babies.

Now, children, I want you to think about what you do all day, and then we will try and find out in how many ways you can help your mother. What are you doing all night? We are sleeping. Can you do anything to help your mother then? No. When do you wake up? In the morning. There is a little boy who says he woke up in the night. Do you always wake up in the night? No, only sometimes. Now, there is something you can do to help your mother directly you wake up in the morning. Cannot you tell me? Some little children wake up very early, long before their mothers and fathers. These little boys and girls begin to play, and call out very loudly, and make such a great noise, that they wake their parents, who want to sleep. Can you tell me why they want to sleep? Because they are tired. Why are your mother and father so tired? Because they have to work very hard. So you see you ought not to wake them. Then the noise often wakes up the little baby, and then what does your mother have to do? Get up and nurse it until it goes to sleep again. Tell me, then, how you can help your mother in the morning when you first wake up? Yes, that is right; you must lie quite still, and not make any noise until your mother tells you it is time to get up. Then she will think you are very good for being so quiet. The children should then repeat, "We help our mother when we lie still and do not make any noise."

When your mother says "Get up," what will you do? Jump out of bed directly, and try to dress ourselves. There are some little boys, and girls too, who do not get up directly they are told. Some like to sleep a little longer, and some like to play in bed instead of getting up. Well, their mother calls them once; then she has to come again, and sometimes again and again before these little boys get up. What does your mother have to do in the morning? Light the fire and get the breakfast ready. Well, you see she has plenty to do, and yet some little children will make her leave off her work several times to call them to get up. Is that the way to help their mother? No, it makes her work much harder. Who can tell me how you could help her instead of giving her more work to do? By getting up directly mother tells us, and trying to dress ourselves. Yes, some of you can quite dress yourselves, but some can only put some of your clothes on.

Those who cannot dress themselves should let their brother or sister dress them, The children should then repeat, "We can help our mother by getting out of bed directly she calls us, and getting ourselves dressed."

When you are dressed you can do ever so many things to help your mother, First, you must remember that you always help most if you do what you are told at once, and do not want your mother to tell you to do the same thing over and over again. Then perhaps your mother may want something that is upstairs. What can you do? We can run and fetch it for her.

When your mother is so busy she cannot very well look after baby, can you tell me how you can help her? We can play with baby and make it laugh, and baby likes this and will not cry. What does your mother have to do when baby cries? She has to nurse it. The children should then repeat, "We help our mother when we play with the baby and keep it from crying."

Now, when your mothers get you ready for school, they make you clean and put on clean pinafores, and try to make you look nice and tidy. Sometimes when little boys and girls are ready for school, they go into the garden or into the street and make themselves very dirty. What do their mothers have to do then? Make them clean again. Is that helping their mothers? No; their mothers have to do all the work over again. And what must they do with the dirty pinafores? They have to wash them. Now tell me, then, how you can help your mothers? By keeping ourselves clean when we are waiting to go to school. The children should then repeat, "We help our mothers by keeping ourselves clean."

Can you always keep yourselves clean? You cannot help getting dirty sometimes, and your mothers are not cross with you then. After you have been in school all day and have been playing, they expect to find you want washing and that your pinafores are dirty. It is only when you do something that you ought not to do, and so get dirty, that your mothers are cross with you.

I dare say you will be able to do a great many other things to help your mothers when you are at home; but you must remember that you never help your mother if you are cross with one another, because that only makes her feel unhappy. Really the best way for little children to be useful, is for them to play with one another quietly, and to do what they are told directly.

BEES.

CLASS—CHILDREN OVER SIX.

Apparatus: Specimens of bees; large drawings showing the structure; some honeycomb, wax.

I. **Description.**—The specimens and drawings should be shown to the children, who would then readily recognise that the bee is divided into three parts, viz.: The head, the chest, and the abdomen or stomach. The children should then be exercised in pointing out the different parts.

Now look at the head of the bee; what can you see there? Two large eyes and something sticking out near its mouth. Yes, this is called its trunk. What animal do you know that has a trunk? The elephant. Yes, but there is a little insect you see flying about the window in the warm weather that has a trunk; what is its name? The fly. Yes, if you look at a fly on a piece of sugar, you will see that it stretches or puts out its trunk to the sugar. For what does it do this? To eat the sugar. Yes, and the bee uses its trunk just in the same way. Look at the body of the bee, and tell me what you notice. A great number of short hairs. How many legs has the bee? It has six. Now look very carefully at the back one and you will see there is a smooth hollow with thick hairs round it. This is called the basket. For what do you use baskets? Well, the bee uses it to carry the dust in. This dust is obtained from the flowers, and forms the wax. Now look at the back part of the bee. Can you tell me anything about it? Yes, it has a sting there. What must you do when you see a bee? Keep out of its way, and not play with it. Why? Because it might sting you. Yes, and the sting of the bee is likely to make you very ill. Do you know why? Because it is poisonous. It is in this part of the bee that the honey is made.

II. **Habits.**—Who has ever seen a bee? What was it doing? Flying about from flower to flower. What does it do while on the flower? Yes, you see it puts its trunk right into the flower and gets something out. Do you know what that is? Yes, honey. Where does the bee take the honey? To its home. What do we call its home? The hive. See what I have here; do you know what it is? This is what the bees make to put the honey in. The young bees are also put in little spaces like these. We call each of these little spaces a cell. It is all called the honeycomb. Do you know of what it is made? Yes, of wax. This wax is the dust of the flowers. Do you remember the little basket on the bee's leg I showed you? This dust or pollen of the flower falls on the bee's body. He rubs it with his legs and it falls into the basket, and in this way he carries it home. Do you know why the bees want to put away the honey? They cannot get honey in the winter. So you see if they did not take care of some, they would have no food, and then what would happen to them? Why cannot they get honey in the winter? Because there are not many flowers, and it is too cold for the bees.

There are three kinds of bees in a hive—the queen, the working bee, and the drone.

The queen bee is the largest one and is the mother, and lays eggs from which the young bees come. The other bees wait on her and bring her food.

The working bees are small and do all the work. They are always very busy.

The drones are the lazy bees. They never do any work. Which should you try to be like, the working bee or the drone?

III. **Summary.**—This should be written on the board as the lesson proceeds, and afterwards written from memory by the children.

The bee is divided into three parts—head, chest, and ab-do-men.

It has two large eyes and a trunk.

Its body is cov-er-ed with short hairs, which catch the pol-len.

It has six legs, three on each side, and on the hind one there is a hollow place called the basket.

Bees give us wax and honey, which they get from flowers.

There are three kinds of bees—the queen, the working bees, and the drones. They all live in the hive.

THE PIGEON.

Class—Children under Six.

Apparatus:—Picture and stuffed specimen of common pigeon.

I. **Description.**—The stuffed specimen should be shown to the children, and they should be asked to name it.

Have any of you seen a pigeon alive? There is a little boy who says he has some pigeons at home. I expect he will be able to tell us a great deal about them.

What would you say about the size of the pigeon? It is not very large. Can you tell me the names of some birds that are smaller than the pigeon? Yes, the swallow, the sparrow, the robin, etc. Now, tell me some that are larger than the pigeon? The hen, the stork, the swan, etc.

Now, tell me the name of the different parts of the pigeon as I point to them. The head, the beak, the eyes, the neck, the wings, the body, the tail, the legs, the toes, the claws.

A picture of several birds should be shown, and then the teacher should call attention to the curved or arched beak of the pigeon. For what does the pigeon use its beak? What is another name for the beak? What would you say of the wings? They are rather long and very strong.

The teacher pointing to another kind of pigeon should say, Both these birds are pigeons. Can you tell me any difference in them? Yes, the tail of that one stands up. Do you know anything that it looks like? It is something like a fan. (If the teacher were here to show the children a fan made of feathers, they would see the resemblance.) Yes, and because this pigeon's tail is like a fan, we call these pigeons *Fan-tail* pigeons. Now, tell me how many toes it has. Three in front, and one behind. What has it on the end of its toes? Claws. What can you say about them? They are curved.

Now, look at the neck of this bird. Is it like this pigeon's? No, it has a large lump on it. Yes, this is also a pigeon, and because the bottom part of the neck is large, we call these birds *Pouter* pigeons.

II. **Habits.**—There was one little boy who told me that he kept pigeons at home. I wonder if he will tell us where he keeps them? In a house in the garden; my big brother made it. That was very good of him. Do you ever see pigeon-houses in any other place? Sometimes they are put on the roofs of houses, and sometimes they are built against the side of a house. Of what are these houses made? Of wood. What are they like? Yes, like a large doll's-house, with a great many little round holes. For what are these holes made? For the pigeons to go into their house whenever they want to. Why do they not have one large hole? Because there are a number of small houses in the one large one, and the pigeon likes to have his own house and door. What do the pigeons do in these houses? They make their nests. Of what do they make them? When they have made them what do they do? Lay their eggs in them. Do you know how many eggs the pigeon lays? Yes, two pretty little white ones. See, here is one. Is it anything like the hen's egg? Yes, only it is very much smaller.

What does the pigeon do after she has laid the eggs? She sits on them to keep them warm, and after a time, when you go to look at the nest, instead of seeing eggs, what do you think you see? Yes, two very little pigeons, with hardly any feathers on. What do the old birds do for these young ones? They get food for them, and keep them very warm until all their feathers come, and they are quite strong. Then they teach them to fly.

What does the pigeon eat? Worms, and different kinds of seeds, oats, wheat, barley. Before the old pigeons give the young ones these seeds, they make them very soft. Do you know why that is? Yes, they are not strong enough to eat the hard seeds. It is just what your mother did when you were very little. She used to make the bread soft for you to eat, but now you can eat it without your mother boiling it.

There are a great many different kinds of pigeons. I have already told you about two. Which were they? The fan tail pigeon. Why do you give it that name? The pouter pigeon. Why is it called the pouter pigeon? Then there is a very funny pigeon that keeps on turning over when it is flying in the air. I daresay if you saw it you would think it was going to fall down. This pigeon is called the *Tumbler*.

There is another kind of pigeon that I must tell you about, for it is very useful indeed. It is used to carry letters from one place to another a long way off.

Shall I tell you how they do this? The letter is written on very thin paper, and fastened under the bird's wing so as not to hurt its wing. The pigeon then flies into the air, and, after flying round, it begins to fly straight to the right place. Do you not think this is very clever? This kind of pigeon is called the *Carrier* pigeon.

There are several other kinds of pigeons, but these I must tell you about another day.

III.—**Summary.**—This should consist of very simple sentences, and should be repeated by the children after the teacher, or a few very simple words should be printed on the blackboard.

The pigeon has a strong beak. It has strong wings. It has short legs. It lives on seeds and worms. There are many kinds of pigeons.

FLOWERS.

CLASS—CHILDREN OVER SIX.

Apparatus—Specimens and pictures of flowers,

1. Now, children, we are going to talk about flowers. Why do you like them? Because they are pretty. Yes, and for

some other reason? Because of their sweet smell. Now let us see how many names of flowers you can tell me. As each flower is mentioned the children should be asked to spell the name, and the teacher should write it on the blackboard in syllables. Of course, the teacher must not expect the children to spell every name, but by carefully separating the syllables, the majority of names will be spelt. Rose, wall-flower, daisy, primrose, crocus, violet, pink, geranium, fuchsia, lily, stock, poppy, pansy, sweetpea, marigold, buttercup, fox-glove, balsam, hollyhock, cowslips, nasturtium, sunflower, mignonette, tulip, daffodil, sweet-william, London pride, dahlia, convolvulus, polyanthus, honeysuckle, chrysanthemum. Now read all these from the board as I point to them.

II. What time of the year do we see most flowers? In the summer time. When do we see very few? In the winter. Yes, the flowers will not grow in the garden then. Do you know where they are then grown? Indoors. Yes, and sometimes houses are built on purpose for flowers, and fires are kept alight all the cold weather; if you were to go into such houses you would see a great many beautiful flowers. What do we call that part of the year when the flowers begin to come again in the garden? The spring. Now I want you to tell me the names of the flowers we see in the spring. See, we will put the figure 1 against the names of the spring flowers.

We walk into the garden and see some little snowdrops. What colour are they? White. And what is the colour of the crocus? Yellow. Yes, but sometimes it is blue, white, and striped. And the daffodils, etc.?

What do we call the part of the year that follows spring? The summer. What kind of weather do we then have? And what does this very warm weather do? It makes the flowers grow. Yes, it makes all kinds of flowers grow. The garden is then full of flowers of all kinds of shapes and colours.

The children should now be asked to name the summer flowers, and the teacher should mark the figure 2 against them. It is more than likely that others will be mentioned. Which of all these flowers do you like the best? The rose.

Why?' Because it is so very beautiful, and smells so sweet and nice. Are all roses alike? Oh, no; there are a great many different kinds. Tell me some of the different kinds. Red, white, yellow, pink, and a very pretty one, with a kind of moss growing all round it. What is it called? The moss rose. Now look at these tulips [Picture to be shown, if no specimens are obtainable], and tell me the different colours. A few other flowers might be picked out and treated in a similar manner, and the variety of shapes called attention to.

Now, when the summer has gone, what kind of weather do we have? It begins to get cold, especially in the evenings, and the evenings seem to begin sooner. Yes, that is right; the evenings do begin sooner, and the weather is colder. What do we call this part of the year? Winter. No, it is not winter yet; we call this part of the year autumn. When does the autumn come? After the summer and before the winter. What kind of weather do we have? What flowers do we have in the autumn? Yes, many of the summer flowers will be seen. Do you know what will kill them? Yes; the cold, frosty nights. Then we have the asters, dahlias, and chrysanthemums. The last one is a very long word for you, but I hope you will try to remember it.

After the autumn what do we have? The winter. And what kind of weather do we then have? Very cold weather. Can you tell me the names of any winter flowers? Yes, you see the chrysanthemums during the early winter time.

III. As a recapitulatory exercise the children might then repeat the names of the flowers growing in each season. When this has been carefully done, the children will have become familiar with the names of the ordinary flowers, and will be able to associate the flowers with their respective seasons. The teacher will feel, after giving a lesson of this description, that she has made the children observe and take an interest in the various objects that Nature so bountifully supplies, and also that she is leading them to look out for the different varieties as each succeeding season approaches.

The children might now receive lessons on special flowers, according to the season of the year. In giving a lesson on a special flower the teacher should be careful to select one that is really in season, as she will then be able to procure a number of good specimens, *e.g.* in the spring the crocus might be enlarged upon : its size, the flower, its beauty, locality, growth from the bulb.

Again, the crocus, the snowdrop, and the daffodil might be taken together, and their description, etc., obtained by comparing one with the other.

In summer the rose, with its varieties in scent and colour, would make a suitable lesson.

Again, the geranium and fuchsia might be taken together —the difference of stem, soft and hard; difference of leaf, round and pointed; and of flower, etc., obtained by comparison.

In autumn the beautiful and many-coloured chrysanthemums could be used for such a lesson, while in winter very interesting lessons could be given on the evergreens—the holly, the mistletoe, etc.

Again, a very useful and interesting lesson could be given by dividing the flowers into the groups, "wild" and "garden," and the children taught where to look for the pretty wild flowers. Town children might have pointed out to them that some of their garden flowers are found growing wild in the country.

Another lesson would be formed by dividing the flowers into groups—beautiful flowers with scent, and beautiful flowers without scent. It might be pointed out to the children that most of the spring and autumn flowers have little or no scent.

THE SILKWORM.

CLASS—CHILDREN OVER SIX.

Apparatus—A silkworm, a chrysalis, a cocoon, a large drawing of silkworm.

I.—**Description.**—Have you ever seen anything like this silkworm? Yes; a caterpillar, a worm. It is something like a worm, but much more like a caterpillar. Who has seen a caterpillar? Where have you seen one? Well, the silkworm is very much like one. What would you say about its shape? It is long and round. Do you know anything that is very much the same shape? Yes, a piece of pencil. What has this worm on its body? A number of legs. Let us count how many legs it has. All of you say, "The silkworm has sixteen legs." How many legs have you? How many more legs than you has the silkworm? It also has a great many eyes. Seven on each side of the head. Now tell me, then, how many eyes it has.

II.—**Habits and Food.**—The children should be asked if they know anything about silkworms. Some children like to keep them. Do you like to keep them? Why do you like to keep them? Because it is so nice to watch them. The silkworm changes several times. First of all it is to be seen flying about, and then we call it a moth. Do you know what a moth is? Where have you seen moths? Tell me an insect very much like a moth? Well, this moth has a short thick body covered with hairs. Tell me the name of another insect covered with hairs? The bee. The wings are white with darkish marks across them. They like to find a particular kind of tree, called the mulberry-tree. On the leaves of this tree the moth lays a number of tiny grey eggs. Do you know why she lays them on the leaves of the mulberry-tree? Well, listen, and I will tell you. The moth does not eat these leaves, but she knows that the tiny eggs will in a few days, turn into little worms. The worms are very fond of the mulberry leaf, and they begin to eat very quickly, and eat all day long. What do you think this does? Yes, it makes the little worms grow very fast, and they keep on eating until they get quite big. They are then full grown and leave off eating, and begin to make something that is of great use to us. Do you know what this is? Yes, they begin to spin the silk. If you keep silkworms, you will notice they wind this silk round and round their bodies, so that, when they have finished spinning, they are inside the silk. What does the silk look like when the silkworm has finished spinning? A little yellow ball. Of what shape? Something like an egg. What name do you give to this shape? We say it is of an oval shape. What colour is the silk? Where is the silkworm? Now you must learn the name of this oval piece of silk. It is called a "*cocoon*." If you were to open the cocoon you would not find the caterpillar, for it has changed into a strange-looking thing. We say it has changed into a chrysalis. Is not that a long word? But if you look at it on the blackboard I do not think you will forget it. See, it is made up of three syllables, chrys-a-lis.

The cocoon or silk ball is really the home of the chrysalis. Well, after a short time the chrysalis also changes, and you will see a moth come out of the cocoon. To get out, it has to make a hole right through the silk, and then the silk is not of much use. What did I tell you the moth does? It flies to the mulberry-tree, and lays its eggs on the leaves. Yes; it does not fly about very much. Now, can you tell me the different changes the silkworm passes through? Yes; first it is an egg, then a silkworm, and then a chrysalis. And what after? A moth. That is quite right. How many different changes? Four.

III.—**Uses.**—You remember that I told you that the moth made a hole through the cocoon to get out. Well, this spoils the silk, so that when people want the silk good they put the cocoons into hot water, and that kills the chrysalis. The silk is then wound off the cocoon, and some day I will tell you how it is made into silk for dresses, neckties, and other things.

IV. **Summary.**—This should be written on the blackboard during the progress of the lesson, and should consist of simple words and sentences. The children should then write these sentences on their slates—

The silkworm is a kind of cat-er-pil-lar. It has sixteen legs and fourteen eyes. It eats the leaves of the mulberry-tree.

The silkworm spins a ball of yellow silk. We call this the cocoon.

The silkworm changes four times. An egg, a cat-er-pil-lar, a chrys-a-lis, and a moth.

Silk is used for making dresses and ties.

SPOON, KNIFE, AND FORK.

CLASS—THE BABIES.

Apparatus:—Spoon, knife, and fork (a plated and steel fork).

I. The spoon, knife, and fork should be placed before the children, and after the children have named each they should be exercised in pointing to them when named.

II. **Description.**—Where have you seen these things before? At home. When do you see them? At breakfast-time, at dinner-time, and at tea-time. Tell me one name for these different times? Meal-times. Now look at the spoon. What can you tell me about it? It is white and bright. What do you call the part I am touching? The handle. And this part? The bowl. And this? The edge. What shape is the handle? Flat, and wider than the middle part. What can you say about the middle part? It is long and round. But this one? It is long and flat on each side. How many sides? Four.

What can you say about the bowl? Can you make your hand something like the bowl of the spoon? Yes, you have to bend it to make a hollow place. What is the use of this? It is used for holding tea, coffee, sugar, etc. Would you be able to take up tea in your spoon if the bowl were flat like the handle? What is the use of the handle? For what do we use spoons? To stir our tea, coffee, etc.; and to taste with. Sometimes we want spoonfuls of things, so then we use the spoon for a measure. Tell me some things your mother measures with the spoon. Tea, sugar, spice, and medicine.

When do we use spoons like this? (Teacher to hold up a small spoon.) At breakfast and tea-time. What do we call them? Tea-spoons. Have you seen any other kind of spoons? Yes, we have spoons at dinner-time. What can you tell me about those? They are much larger. Do you know what we call them? Table-spoons. Who uses the table-spoon? Our mother. For what does she use it? To serve us with potatoes, cabbage, etc. Would tea-spoons do for this? Why not? They would not be large enough to hold potatoes. The children should then repeat "A spoon has a handle. A spoon has a bowl. We take hold of the handle when we use a spoon. We use spoons to eat our bread and milk with, to stir our tea, and eat our pudding."

Now I will have a little boy to pick up the knife for me. Of which part of the knife does he take hold? The handle. Is this handle like the handle of the spoon? Do you know how they are different? The handle of the spoon is like the other part of the spoon; but the handle of the knife is quite different to the other part. What colour is the handle of the knife? Do you know of what it is made? Of bone. Who can touch another part of the knife? What part did Harry touch? The blade. Yes, and you must mind and touch it very carefully. Can you tell me why? Because it is very sharp. But what then? It might cut our fingers. So you see it is better for little children not to touch knives. Who uses them? Our mothers and fathers, and our big brothers and sisters. For what do they use them? To cut bread, meat, and a great many other things. When they use knives, how do they hold them? They take hold of the handles. With which hand? The right hand. If you look at a knife you will see that the edges are not alike. What can you say about this one? It is very thin. Which edge do we call this? The front or sharp edge. And what can you say about this one? It is the ck of the knife. And what else? It is not sharp. Why do we not have both edges sharp? Because we should cut our fingers when cutting the bread, etc. The children should then repeat, "A knife has a blade and a handle. The blade of the knife has a sharp edge. It is used for cutting our food."

Now who can tell me what else I have on the table? A fork. Come and pick up the fork for me. Which fork is most like the knife? This one. How is it like the knife? It has a handle like the knife. Yes, this has a bone handle. What is the handle of this fork like? It is like the handle of the spoon. Well, we will talk about the one like the knife. We call it a steel fork because, like the blade of the knife, it is made of steel. Has it a blade like the knife? No, it has not a blade. What do you see instead of a blade? Three pieces of steel. How do they feel? Very sharp at the ends. What will they do if you put them close up to your hand? They will prick it. We call these the "*prongs*." How many prongs has this fork? Three. For what do we use the fork? To hold our meat when we want to cut it; and to put our food into our mouths. Why do we not use our knives for this? Because we might cut ourselves. Would not the spoon do? Yes, but not to hold things with when we want to cut them. Of what use are the prongs? They stick into the meat and hold it still. Ought little children to play with forks? No, they would hurt themselves if the prongs were to stick into them.

Now look at this fork. Which part is like the spoon? The handle. And how else is it like the spoon? It is all in one piece, and of the same metal. Most people now use forks like this one. How many prongs has it? Four. How many has this steel one? Three. Which one has the more? How many more?

The children should then repeat, "The fork has a handle. It has three sharp-pointed prongs. We use a fork to keep our food still when we want to cut it with the knife. We put the food into our mouths with a fork."

FOOD.

Class—Children over Six.

I. **Introduction.**—What do you call the first meal you have in the morning? Breakfast.

What do we have for breakfast? Bread-and-butter, tea, coffee, milk, and sometimes fish, eggs, or bacon.

When do you next have anything to eat? At dinner-time. What do you have for your dinner? Meat, potatoes, cabbage, and sometimes peas or beans. Do you have another meal during the day? Yes, we have tea. What do you have for your tea? Bread-and-butter, and sometimes marmalade or jam. Is that all? Do you not drink anything? Oh, yes; we have tea, or hot milk, or cocoa.

Now tell me the different times during the day that you have meals. Breakfast, dinner, and tea-time. How many times is that? Three. Is there not another meal? Yes, father and mother and grown-up people have supper. When do they have supper? At night, when we are in bed.

Can you give me one name for all the different things you have for breakfast, dinner, and tea? Yes, they are called food. What do we do with the food? We eat it. Do we eat tea, coffee, cocoa, and milk? No, we drink those things. Tell me the names of some food we eat? Bread, meat, potatoes, cheese, cabbage. Now tell me the names of some we drink. Tea, coffee, cocoa, milk, water.

II. **Uses.**—How do you feel if you have not had any food for a long time? Very "*hungry.*" And how do you feel if you want something to drink? Very "*thirsty.*" Do you know why we eat and drink? Because we are hungry and thirsty. What does the food do for us? It makes us grow big and strong, and keeps us from being ill. What would happen to us if we were not to have any food? We should be ill and die. Then, you see, food keeps us alive and makes us grow strong.

III. **Different kinds.**—Now I want you to think of all the different things we eat, and see if we can find out where they come from. First think of your dinner; what do you generally have? Meat and potatoes. Where does your mother get the meat? She buys it of the butcher. Tell me some some different kinds of meat? Mutton, beef, pork, veal. What else do you have—think of Christmas? Ducks, goose, turkey, fowl.

What do we call mutton? The flesh of the sheep. What is done to the sheep before the flesh is called mutton? It is killed. What is beef? What is pork? Yes, but the flesh of the pig is also called bacon. I will tell you the difference between pork and bacon. When the pig is killed the flesh is called pork. A great deal of this pork is salted and smoked by means of wood fires, and then it is called bacon. And what is veal? The flesh of calves. What are calves?

Can you give me one name for bullock, sheep, pig, duck, goose, turkey, fowl? Yes, they are all animals. Then, you see, all our meat is obtained from animals, and therefore we call it *animal food*. But there are also some other animals that we eat. Cannot you think of any? I am thinking of fish. Now tell me the name of some? Cod, herring, haddock, eels and plaice. One little boy said bloaters. Well, you must remember they are dried herrings. Now name all the animal foods you know, and we will write the names on the blackboard.

What do you have for your dinner besides meat? Potatoes and cabbage. Try to think of something else. Beans, peas, turnips, carrots. Do you know what we call these things? Well, look at the word I am writing on the board, veg-e-ta-bles. Now what do we call them? Vegetables. How many kinds of food do you know? Two. What are they? Animal food and vegetable food. We will now write down all the vegetable foods you can think of. You said you had bread and milk for breakfast. From where does the bread come? From the baker. Do you know of what the baker makes the bread, and from whence the flour is obtained? Then under which kind of food shall we put the bread?

From where do we get the milk? From the cow. Then in which line shall we put milk. Then you eat butter. Who can tell me where we get butter? Of what is it made? Then where must we put butter? One little boy said he had an egg. Where do you get eggs? In which line shall we put eggs? In a similar manner the teacher should deal with the other things mentioned by the children.

IV. **Summary.**—This would consist of the two columns of names containing (*a*) animal food; (*b*) vegetable food.

The children then for an exercise should divide on their slates each class of food into (*a*) food for eating, (*b*) food for drinking.

Another exercise might be to require the children to point out the foods used at the different meals.

THE ORANGE AND THE LEMON.

Class—Children over Six.

Apparatus:—An orange and lemon. A picture of the trees.

The children should be asked to name these fruits, and then their attention should be directed to the orange.

I. **Description.**—What can you tell me about the orange? It is round. What colour is it? Of a reddish yellow colour. This kind of yellow we call orange colour. It is also bright. If you feel it, what would you say? It is smooth and rather soft.

Before you eat an orange, what do you have to do? Take off the outside. What is the outside called? The peel. Who can peel this orange? Do you peel it like you do an apple? No, you can pull the peel off the orange. And the apple? You must cut the peel off. Now let me look at the peel. What colour is inside? It is white. Yes; now look at the edge of the peel, and tell me whether the yellow or white part is the thicker? The white part. Yes; the yellow part is very thin. How does the yellow part taste? Very bitter. Do you eat the peel? No; it is not nice. Which part of the orange do you eat? The inside. Well, we will now look at the inside. What colour is it? Yellow.

What covers the inside? A very thin skin; here is a piece of it, it is so thin that you can see through it. Now watch me; what am I doing? Breaking the orange into pieces. What do you notice about each piece? It has a thin skin all over it. Let us count how many of these pieces there are. How many? Ten. Sometimes there are nine, and sometimes eleven. Look at one of these pieces; what shape is it? It is half a circle. Yes; the outside of the half circle is very thick, and then it gradually gets thinner. Anything of this shape is said to be wedge-shaped. We will now break this skin, and then what do you see? Juice, pips, and the pulp. Which do you eat? The juice and the pulp. What do you do with the pips? Throw them away. Now look at the pulp; what can you say about it? It is yellow, very soft, and made up of a great number of little pieces; if you taste it, it is sweet. Are all oranges sweet? No; some are very sour. I suppose you do not like them, then?

II. **Uses.**—For what do we use oranges? For eating. Do we eat them for our dinner or tea? Oh, no; we like to eat them at any time. When do you like an orange? When we are thirsty. Why? Because it is so juicy that it quenches our thirst. There is another use we make of oranges; do you know what it is? They are made into marmalade. What do we do with marmalade? Put it on our bread and eat it; it is something like jam. Then I daresay when you are eating cake you sometimes find some pieces of peel. The peel of the orange is used for this purpose after it has been preserved with sugar. This peel is also put in puddings.

III. **Where found.**—Do you know where we get oranges? They grow on a tree called the orange-tree. We do not see orange-trees growing in this country, for it is not warm enough to make the fruit nice; they grow in very warm countries. Do you know how we get them here? They are picked off the trees and packed very carefully in boxes, and then they are brought to England in ships. Who has seen one of these boxes of oranges? What have the oranges round them? They are wrapped in soft white paper. Do you know why this is done? To keep the oranges from rubbing and knocking against each other. What would happen if they did knock against each other? They would be bruised, and then they would go bad.

We will now talk about the lemon.

I. **Description.**—What can you tell me about it? Is it the same shape as the orange? No, it is not so round. Tell me something that is of the same shape. An egg. What do we say of things that are of this shape? That they are oval. Now, all of you repeat, "The lemon is of an oval shape." What about the colour of the lemon? It is lighter than the orange. Yes; we say the lemon is of a pale yellow colour; it is smooth and rather soft, like an orange.

What part is this? The peel or rind. You see I can take the rind off just in the same way as I did the orange. Now look at the peel; what will you say? It is made up just like the orange, yellow outside, and a thick white part inside. Yes; and you must be very careful not to eat the white of the orange and lemon, for it is likely to make you ill. Now look at this part, and you will see that it is covered by a thin skin, just like the orange, and yet when you look at the inside of the lemon you can see a great difference. What is the difference? It is very pale in colour. How else does it resemble the orange? You are able to divide it up into a number of small pieces. Yes; count the pieces and tell me how many there are. Now look at one of the little pieces and tell me what you notice. We see that there are pips, pulp, and juice, just like the orange. Taste one of the pieces; does it taste like the orange? Oh no, it is very sour.

II. **Uses.**—For what do we use lemons? To make lemonade. For what do you use lemonade? For drinking. Why do you not eat lemons as you do oranges? Because they are so sour; we make a drink of them instead, and we put a great deal of sugar with them. For what else do we use lemons? They are sometimes made into marmalade, and they are used to flavour pies, cakes, etc. Lemon peel is also used like orange peel, to put into cakes, puddings, etc.

III. **Where found.**—Lemons grow on trees in warm countries, like the oranges, and they are sent to this country much in the same way. Lemons are wrapped in paper and packed carefully in boxes.

IV. **Summary.**—The orange and lemon have a peel; they are divided into parts. Each part contains pulp, pips and juice.

They grow on trees in very warm countries.

The peel of the orange and lemon is used for fla-vour-ing.

The orange and lemon are made into mar-ma-lade.

The orange is round and the lemon is oval.

The orange is sweet and the lemon is very sour.

The orange is used for eating, and the lemon is made into lem-on-ade.

This summary would have to be written on the blackboard at the end of the lesson, so as to make a comparison between the two fruits. It should be obtained from the children, and would thus serve as a recapitulatory exercise.

THE OYSTER.

Class—Children over Six.

Apparatus—Oyster, a few shells, an oyster-knife.

I. **Description.**—The children should be shown an oyster, and asked to name it. What part of the oyster can you see? What part am I touching? The outside, or shell. Where is the oyster? Inside the shell. What can you say the shell of the oyster is? It is its home. Can you tell me the names of any other fish that live in shells? Yes, the periwinkle, whelk, mussel. Is the shell of the periwinkle like the shell of the oyster? Is it like the shell of any of these fish? No, it is very different. Here is an oyster shell, what can you say about it? It is of a brownish colour. It is rough. It is made up of different pieces. Yes, when a shell is like this, we say it is scaly. Now, look at the inside of this shell, what can you say about it? It is bright. It is of a white colour. Some parts look like pearls. Which side of the oyster shell is the prettier? The inside.

Now, look at this oyster, and tell me how many shells it has? It has two shells. Are they both alike? No, one shell is flat, and the other part is larger, and has a large hollow in it. Which shell is the flat one? The top one. Yes, and it is not as rough as the under, or lower one.

I will now open this oyster; do you know what I shall have to use? A knife. Will my penknife do? No, it is too sharp, and not strong enough. Yes, the oyster is very hard to open. What do you see inside the shell? An oyster. Where is it? In the large, or lower shell. Can you move the shell away easily? No, the oyster is joined to it. What must I do, then? You must cut the oyster away from the shell. Tell me something about this oyster. It is soft, cold, slippery, and of a light colour. Do you see these pieces of flesh lying along the shell? They form what is called the *mantle* of the oyster. If you look carefully at the mantle, you will see something along the edge. What can you see? The edge is nearly black. This is called the *beard* of the oyster, and forms the gills. For what do fish use their gills? To breathe with.

II.—**Uses.**—For what do we use oysters? For eating. They are considered very good food, and sometimes, when people are ill, they are ordered to eat oysters. Do you know why? To help them to get strong.

Then there are some oysters that are very valuable, because of pretty little things found in the shell. They are called pearls. Have you heard of pearls? Have you seen any? Mary says, her sister has a pearl necklace, and another little girl says her mother has a box made of pearl. This pearl is the inside part of the shell of the oyster. The little pearls I was telling you about are used to put in rings, lockets, pins, etc. It would be well for the teacher to show the children some jewellery containing pearls, so as to help them to distinguish between these pearls and the mother-of-pearl used for buttons, knife handles, in inlaying wood, etc,

III.—**Where found.**—Where do all fish live? In the water. Can you tell me what most fish do in the water?

Swim about. Does the oyster swim about? The oyster is not able to swim. It fastens itself to a piece of rock or stone and remains there. Which shell do you think is fastened to the rock? The bottom one. A great many oysters are found together, and the place where they are found is called an oyster-bed. How do you think we get the oysters from the bottom of the water? Well, I will tell you. Men take out a small net, fastened to a round ring of iron. They let this down to the bottom and then drag it along, and thus scoop up the oysters, and many other things that are in the water. the oysters are then picked out, and sent to the shops for us to buy. The oysters containing the beautiful pearl for making buttons, etc., are not found near our country. They are brought from places a very long way off.

IV.—**Summary.**—This should be written on the board as the lesson proceeds, and should consist of simple words. It should then be copied by the children, or read, and afterwards written from memory.

An oyster lives in two shells in the water.

A part of the oyster is called the mantle. The gills are called the beard. The oyster is used for food.

The shells of some oysters are used for making buttons, handles of knives, pretty boxes. This substance is called mother-of-pearl.

Small pearls for rings, lockets, etc., are also found in oysters.

THE SPIDER.

Class—Children over Six.

Apparatus:—Picture or enlarged drawing of a Spider.

I.—**Description.**—Children to be shown the picture, and to be asked what it is. Yes, it is a spider. Have you ever seen one? Where? Sometimes in the corners of the rooms How do you know there is a spider in the corner? You see a cobweb. What does your mother do when she sees a cobweb? She gets a broom and sweeps it away. Why? Because it looks dirty and untidy. What does the poor little spider have to do then? It has to go somewhere else and make its web. You may sometimes see them in gardens, on bushes and trees, and if you ever go into a cellar you will be sure to see some there.

I want you now to look at this large picture of a spider, and tell me all you can about it. Look at its head; do you see how it is joined to its body? Yes; the spider has no neck, its head is joined on to its body without a neck.

What has the spider in front of its head? Two long horns. Well, they are something like horns, but we call them pincers. Repeat, "The spider has a pair of pincers in front of its head." Do you know the use of these to the spider? It uses them to catch its food. Now you may count its eyes. How many can you see? Eight; two in front, two on each side, and two at the top. I wonder what is the use of all these eyes to the spider. How many have you? Only two. Where are they? In the front of our head? What do you do when you want to see something at the side of you, or behind you? Turn our heads. Well, you see, the spider has no neck, therefore it cannot turn its head about like we can, so what has it to enable it to see all round? Eyes in different parts.

Now let us see how many legs it has. Eight. It will be easy to remember that the spider has eight eyes and eight legs. Look at the legs again. What do you see at the end of them? Yes, they are like two hooks, something like the pincers. Where are the pincers? Quite right. They are in front of the head.

II. **Habits.**—Children to be asked what the spider has to eat. Flies and other insects. How does it catch these? In its web. Would you like to know how it makes its web? Well, I will tell you. The spider has in its body some juice, very thick and sticky, something like treacle What colour is treacle? This juice is not the same colour as treacle, it is quite white. It is of this juice that the spider makes its web. When it wants to weave its web, the juice comes out of its body through very tiny holes, and makes a kind of thread. A drawing of the web might be shown and examined, the teacher pointing out how the threads cross one another, and are fastened at the ends. Why does the spider weave its web? To catch its food. How is it that the flies go into this net? The web is so fine that as the fly goes along quickly it does not see it and so is caught in it. Where is the spider? He is somewhere very near waiting for some food; directly he sees the fly caught he walks round and round it, all the time winding a thread round to fasten its wings and legs; then the spider pierces the fly with its pincers, and sends some poison into the holes made; the fly is thus killed, and the spider has its food. He then mends the web and watches for another insect.

III. **Summary.**—The spider's head is joined to its body without a neck. The spider, has a pair of pincers in front of its head. It has eight eyes and eight legs, furnished with two hooks something like its pincers.

The spider lives on flies, gnats, and other insects, which it catches in its web.

It weaves its web of a substance which comes out of its body through little holes.

This should be written on the blackboard as the lesson proceeds, and at the end carefully read through by the children. If convenient, the children should copy it on their slates.

THE COD.

CLASS—CHILDREN OVER SIX.

Apparatus: -If possible, a small Cod might be shown to the children, or a picture of one; some smaller fish.

I. **Description.**—The smaller fish, *e.g.*, herring, haddock, mackerel, plaice, etc., to be brought before the children, who should be asked to name them. The cod now to be shown. What kind of fish would you say this is? A large one. Do you know its name? Yes, it is a cod. This is a very small cod; most of them are about as long as this—(show length of 2½ feet or 3 feet, the average length of the cod), and there has been one caught as long as this (show length 5 feet 8 inches). What can you now tell me about the cod? It is a large fish. Are they all the same size? No. Then we say they vary in size. Now look at the head of the cod. If you feel it what do you find out? It is very smooth. Look at its body, where is it the thickest? In the middle. Repeat: The cod's body is thicker in the middle than it is at the ends. With what is it covered? With scales. What is the colour of its body? It is different in different parts—in some places of a greenish colour, and in other parts white. What can you tell me about its mouth? It is large, and do you see what it has at the end of the lower part of its mouth? We call this a *beard.* Have you ever seen any one with a beard? Yes, some of your fathers have beards. Where do they have them? On their chins. If you were to look inside the cod's mouth, do know what you would see? Teeth. Yes, a great many teeth—several rows of them. How many rows of teeth have you? Only one. Repeat, "The cod has several rows of teeth."

Now see what the cod has on its back. Fins. Let us count them. Three on the back, two at the gills, two on the breast, and two near the tail. How many fins? What is the use of the fins?

II. **Habits and Food.**—Where does the cod live? In the sea. Is it found near our own country? Yes, but it is still more common near countries a very long way from here—they are much colder countries than ours. Men go out in ships to these places to catch the fish. What are these men called? Have you ever seen anyone fishing? What do they use to catch the fish? Sometimes a net, and sometimes a long line with a hook at the end. Well, the men who go to catch cod use a hook and line. Some men catch a great many cod. What do they do with them when they have caught them? They put them in the ship and bring them home.

What does the cod get to eat in the sea? Fish. Yes, they eat small fish and worms. They also eat crabs. What are crabs? Yes, they are fish. With what are they covered?

With shells. Do you know any other fish covered with shell? We call all these shell-fish. The cod is very fond of eating shell-fish.

III. **Uses.**—For what do we use the cod? For food. What does your mother do with it? Boils it. How does the fish look when it is cooked? Very firm and white; it is very nice to eat. There is one part of the fish that is sold by itself; do you know what it is? The roe. This also is very nice when it is cooked. Do you know any other use of the cod? Have any of you ever tasted cod-liver oil? Some of you have had some. Why did you have it? It is a medicine, and people take it to make them well and strong. We get cod-liver oil from the cod—there is one part inside the cod called liver. You all know what liver is, and it is from this part that the oil is obtained.

IV. **Summary.**—The cod is a large fish. Its head is very smooth.

The cod's body is thicker in the middle than at the ends.

It is covered with scales. The cod has a large mouth, with several rows of teeth. It has a beard.

The cod has nine fins.

The cod lives on small fish and worms. It also eats shell-fish.

The cod is used for food. Cod-liver oil is obtained from its liver.

SECTION II.—THE PHENOMENA OF NATURE.

In giving lessons in this section the teacher will find that the children will take more interest and the lessons will prove more beneficial if she selects appropriate days for them; *i.e.*, a day on which the particular phenomenon forming the subject of the lesson can be seen by the children. A lesson on snow given in summer would be an unnecessary tax on the children's memory, would increase the difficulties of the lesson, and probably leave false impressions on the children's minds. On the other hand, if given when the snow is falling or has already fallen, the children would be interested in the matter, ready to talk on the subject, and hence eager to learn all they could about it.

In drawing up a course of lessons, it would be as well if the teacher were to take this into consideration, and thus, as far as possible, place each subject in its appropriate season.

The lessons in this section will be almost entirely conversational, since with infants it would be impossible to treat the matter scientifically; in fact, the teacher will have to be very careful to keep her lesson within the range of the children's capacities.

SECTION III.—SCENES OF COMMON LIFE.

Here, again, it will be necessary for the teacher to select, especially for the first few lessons, those scenes which are most familiar to the children, *e.g.*, for country children, lessons on the garden, the fields, the farm, etc., would be suitable; whereas for town children, lessons on a shop, the streets, conveyances, railway stations, etc., would be more appropriate.

SECTION IV.—COMMON EMPLOYMENTS.

In this section the teacher would require good diagrams of the ordinary trades, and would, of course, select those of the immediate neighbourhood with which to commence.

It is intended in the following articles to give lessons in these three sections.

THE RAIN.

I. Now, children, I want you to tell me how it is your boots are so dirty, and your hats and coats so wet? It has been raining. How is it that the rain makes you wet? Because it is water. The children should then repeat, "The rain is water, and therefore if it comes down on us it makes us wet." From whence does the rain come? From the clouds. If we look at the sky before it begins to rain, what do we see there? Clouds. Do the clouds always look the same? No, sometimes they are very black; sometimes they look like white smoke, sometimes they are all over the sky, and sometimes they seem only in one part. Can you tell me anything else about them? They sometimes seem very thin and light, and sometimes so thick that you cannot see through them. Very often you can see the clouds moving along. When the clouds are thin or not all spread out, what do you see above them? The bright blue sky. This looks very pretty. Do we like to see the sky covered with dark clouds? No, it looks very dull. And for what reason? Because it will rain. And why do not little children like rain? Because we cannot go out to play; and we do not like to stay indoors.

Are there always clouds in the sky? How does the sky look when there are no clouds? Very high up and very blue. Then what do you see in the sky? The sun shining brightly. Do we know when it is going to be cloudy? No; we look at the sky and it is quite bright when we go to bed, and very often in the morning we find it raining. What should we have seen if we had sat up all night? Clouds coming over the sky. Yes; the clouds form in the air, and after a time they break and then the rain comes down. There are some countries where the people know when it is going to rain and when the rain will stop. In these countries the rain keeps on for a very long time—several weeks or even months, and then when it stops it does not rain again for a long time. Is this the case with us? No, we do not know when it is going to rain or when it will stop. Do you think you would like to live in those countries? Why not? There would be so many wet days together. And what about the time when there is no rain at all? Do you know what happens to the ground? That is right; it gets very dry, and the sun is very hot. You could not play then because of the heat. Do you know what we call that part of the year when the sun is very hot? Yes, the summer. Can you run about then? Yes, but we soon get tired. Do you know what we like to see when it has been very hot? The rain. Why? Because it makes everything seem so fresh and cool. Then how do you think the people who live in those very hot countries feel when they see the rain coming? They are very pleased. Why? Because the rain makes the air cool. Little children very often like to watch the rain from the window. Perhaps they have been playing; they see the rain, and run indoors to watch it. You told me just now that the rain comes from the clouds; how does it come down? It falls down. But if you look at the pavement directly it begins what do you see there? Little spots. How can you make drops like that? By dropping water slowly. If I pour water from a jug, do I make spots? No. Why is this not like the rain? The children should then repeat, "Rain falls from the clouds in drops." Does the rain always come down the same? The teacher should then explain to the children that the rain always comes in drops; but sometimes these drops are very large, sometimes small, and sometimes so small that you can hardly see them. Again, the rain sometimes comes down quite straight, and at other times slanting. Sometimes the rain is so slanting that if you stand under a high wall you will not get wet. Do you like being out when it is raining very fast? Why not? It makes us wet, and we might catch cold. Do you like to watch the rain come down very fast? What do you see when you watch the rain beginning? A few large drops, then they come faster and faster, till at last they seem to come down all together, and run along the streets. The gutters are quite full of water, which runs along very quickly. Perhaps there were some people in the street when the rain began. What did they do? They began to run, and in a few minutes there was nobody in the street. What do we call the rain that comes down suddenly, and then leaves off and it is fine again? A shower of rain. What do people use when they go out into the rain? Umbrellas. Anything else? Overcoats. Yes, and have you not seen men with shiny coats and capes? What are these coats called? Waterproof coats. What do you mean by waterproof? Anything that will not let water through is said to be waterproof. What does your mother put on her feet to keep her boots dry? Goloshes.

II. Now we have found out a great deal about rain, but there is something more I want you to tell me. Do you know of what use the rain is? To make the ground wet. Why do we want the ground wet? To make the things grow. Tell me some of these things? Flowers, apples, pears, vegetables, trees, etc. How does the ground look when it has not rained for some time? Very hard and dry. What do you do to the garden then? Pour water from the can. Yes, I suppose you have noticed the end of the spout of this can. What can you say of it? It is full of little holes. Yes, this is to make the water come out more like the rain. What does the water do? It makes the ground softer and the plants fresh and bright. Yes, the rain is part of the food of plants. The children should then repeat, "The rain softens the ground and makes the plants grow."

That is one use of rain; now I want you to tell me another. What do you want when you feel thirsty? Water to drink. Where does this water come from? Yes, you get it out of the tap; but if it were not for the rain, we should not have any water to drink. The children should then repeat, "It is the rain water that we drink."

Some of your mothers have very large tubs in their gardens. Do you know the use of these? To catch the rain. What do they do with the rain water? Use it for washing both themselves and the clothes. How does this water feel? Very soft and nice. Does it taste and feel like the tap water? Oh no. That is right, and some day I will tell you what makes the tap water taste and feel different to the rain water.

A SHOP.

1. **Introduction.**—The children should be asked, If your mother sends you to buy some bread, where do you go for it? To the baker's shop. Do you know any other kind of shop? Name some. What is a shop? The answer will most likely

be, "A place where we can buy different things." Can we buy all things at the same shop? No, we buy different things at different shops.

II. **Description.**—Can you tell me what kind of a place a shop is? It is like a house, I should say it is a part of a house. Which part of a house is it? It is the bottom part of a house. Is there nothing underneath the shop? Yes, very often the kitchen is under the shop, or else there are cellars. What is there over the shop? There are rooms. Now what is the shop like? Yes, it is like a very large room. But do you know how it is different from a room? It has a very large window. Do we ever have such large windows to our rooms? No. Generally, all the front of the shop is a window. How do you get into the shop? By the door. Where is the door? By the side. Yes, but sometimes the front of the shop has two windows; then where is the door? In the middle. What do you generally see outside shops, over the door or window? We see a name. Whose name is it? The man's whose shop it is. Yes, he generally has his name, and sometimes, too, the kind of shop he keeps. If a man sells bread, what would he have over his shop? Baker.

Now we will go into the shop. How shall we get in? By the door. What shall we see when we get in? The counter. What is the counter like? It is something like a long table. There is one difference between the counter and a table; what has the table that the counter has not? It has legs. What has the counter instead of legs? A piece of wood all along. Do you know what is the other side of the counter? Generally drawers, sometimes only a cupboard. Now if the counter were made exactly like a table, with legs, the shop people would not be able to put anything under it, because it would look so untidy, therefore it is all covered in with wood. What is the use of the counter? To put things on. Where does the master of the shop stand? Behind the counter. Where do you stand when you go into the shop? In front of the counter.

There is very often one particular drawer in the counter; do you know the use of it? The man puts the money into it.

Do you know what it is called? The till. What is the use of the till? Is the drawer always opened for the money to be put in? No, sometimes it is dropped in through a hole in the counter. The till is generally kept locked. Why?

Now, if you look round a shop, what do you see in it besides the counter? Yes, there are generally a great many shelves. What is the use of these shelves? Do you ever see anything else in shops? Very often there are chairs for the people who go to buy to sit on. Do you know what the master of the shop calls the people who go in to buy? His customers. And what do we call the master of the shop? The shopkeeper. Then some shopkeepers put chairs in their shops for their customers.

The teacher might here let the children describe any special shop, *e.g.*, some shops have a counting-house—some have hooks and no shelves (butcher's)—the peculiarities of the fishmonger's, the chemist's, etc. etc.

You told me that shops have large windows, do you know why this is? To make the shop light. Yes, and there is another reason. Do you like to look in shop windows? Why? Because of the pretty things in them. Who puts these pretty things in the window? Why? To make people look in and see what nice things he has to sell. The shopkeepers like large windows so that they can put a great many things in them, and make them look as pretty as possible.

When you go to buy anything for your mother, what does she give you? Some money. To whom do you give it? To the shopkeeper. What does he give you? Perhaps some sugar or tea—indeed, whatever you ask him for. What does he do with these things before he gives them to you? He wraps them up in paper. Yes, and before that what does he do? He weighs them. What must he have in order to weigh them? Scales and weights. If you go to buy milk, do you have it weighed? What does the milkman do? He measures it. If you go to buy calico, what does the man do with it? He measures it. Is that measure the same as the one used for measuring milk? Now we have found out that some shopkeepers use scales and weights and others use measures. These measures are of different kinds and shapes.

Now there is one thing that people who go to buy at shops ought to be very careful about. Supposing Mary's mother gave her sixpence and told her to go and buy a pound of sugar, what would she have to bring back to her mother? Sugar. Yes, and something else besides sugar. Some money. Do you know how much money? Threepence. What do we call that threepence? The change. Then Mary would have to bring back the sugar and the change. If her mother only gave her threepence, what would she have to bring back? Only the sugar; there would be no change. Then when you go to buy, you must be very careful about the change, and take care not to lose it going home.

There is still another thing I want to ask you. When your mother sends you for some bread, where will you go? To the baker's. And if she sends you for tea? To the tea-grocer's. And for potatoes? To the green-grocer's. And for soap? To the oil-shop. Now when your mother sends you for anything, you must first think to what shop you have to go to get it, so that you do not go to the wrong shop. It would be rather silly to go to the butcher's and ask for some bread, or to the baker's for some meat, wouldn't it?

III. **Summary.**—A shop is a place where we buy different things.

The owner of the shop is called the shopkeeper; the people who buy are called the customers.

The shop has a large window, sometimes two. It has a counter, shelves, scales and weights, or measures.

THE BAKER.

Apparatus:—Some flour, yeast, salt, water, wheat. A pan for mixing flour, yeast, and water. Some "sponge" and dough. Picture of baker.

I. **Introduction.**—The children should be questioned on what they had for breakfast. Ask them if they know who makes the bread? The children should then repeat, "The man who makes bread is called the baker." Does the baker make anything besides bread? Yes, he makes buns, cakes, biscuits.

II. **Bread-making.**—I have all the things on the table used to make bread. I want you to look at them and tell me their names. The teacher, pointing to some flour, asks, What is this—and this? You do not know? Well, I will tell you. We call this yeast. Water and salt should then be pointed to and named. Now tell me all the things used to make bread. Flour, yeast, salt, and water. Who can tell me from whence we get flour? From wheat. Here is some wheat, is it like the flour? No. What has to be done to it to make it into flour? It has to be ground.

Now, suppose we are going to make bread, what must we get ready first? A pan, or something to hold the different things. Well, here is a pan; you see what I put into it. Some flour. Yes; and now what have I put? Some water. Feel this water; what do you notice? It is warm. What am I doing now? Mixing the flour and water. What does it look like? Batter. For what does your mother use batter? For making puddings, and sometimes she dips fish into batter before she fries it. Now see what I put into this batter. Some yeast. The baker mixes flour, water, and yeast just like this, and then he sets it aside in a warm place for six or eight hours. This he calls "setting the sponge."

I have some "sponge" here that has been kept for some time; is it like it was when it was first mixed? No, it is much larger—we say it has risen. Have you ever seen anything that has risen? Yes, your mother sometimes makes cakes, and when they have been in the oven a little while, they begin to rise. Now you see that is what the sponge does: it is left in a warm place and it rises. What does the sponge look like? Yes, it is very much like the yeast.

The children should now compare the sponge with some bread; they will see that it is too thin to make bread.

How can you make it thicker? What does your mother do if she puts too much water with her pudding? She has to add more flour. Very well, this is what the baker does. He puts some flour—much more than he used for the sponge—into a wooden trough; he mixes a little salt with it. He then mixes some warm water with the sponge, and pours it into the flour in the trough. The whole is then mixed together and kneaded into dough. What is meant by kneaded? This dough is then allowed to stand in a warm place for several hours, and at the end of this time it will have risen just as the sponge did. This dough is now kneaded again and left to rise again, then it is quite ready to make into bread. Here is some dough. What can you tell me about it? It is soft and white, much firmer than the sponge. This is now ready to be made into bread. What must the baker do with it? He must cut it into pieces. Yes; and he must weigh all these pieces to see that they are the same weight. Why must each piece of bread be weighed? Because, every one wants the same amount for his money. After these pieces are weighed, they are made into different shapes. Tell me some of these different shapes. Bricks, squares, cottages, coburgs—these are all loaves. The whole number of loaves made at the same time is called a *batch*. When the loaves are made, what has to be done to them? Yes, they must be baked. They are allowed to stand for a little while, and then they are put into a very large oven and baked. The loaves are put into the oven and taken out with a peel. This should be described. Why cannot the baker push the loaves in with his hand? He would get burnt. Why is it necessary that the peel should be so long? Because the oven is so large.

Which part of the bread did we make? The sponge. Could we make a loaf of bread during our lesson? Why not? Because the "sponge" has to stand a long while, and the dough also, before it can be made into loaves. Then, altogether, you see it takes a long time to make bread. When do we want new bread? In the morning. When do you think the baker makes the bread? Yes, he has to work all night in order to get the bread out of the oven by the morning. When must he go to bed?

III. **Summary.**—This should be written on the black board as the lesson proceeds:—

The man who makes bread is called the baker.
Bread is made of flour, water, yeast, and salt.
The baker first makes the sponge.

The sponge mixed with water is poured into some flour, with a little salt in it; this is kneaded into dough.

The dough is cut and weighed, and made into loaves.

These loaves are baked in a large oven.

The baker uses a peel.

SECTION II.—PHENOMENA OF NATURE.

THE SNOW.

Now, children, we have had a talk about rain, and you can tell me which time of the year we like rain. In the summer-time. When else do we have rain? All the year round. Yes, it rains both in warm and cold weather. There is something else that falls from the clouds besides rain, and it only falls in cold weather. Can you tell me what it is? It is snow. Well, I want you to tell me all about the snow. It is white and soft. Yes, and does it come down like the rain? No, the snow does not fall at once. What do you mean? The pieces of snow seem to fly about after one another and then fall. What do we call the pieces of snow? Flakes. Yes, look now at the flakes of the snow—they seem to be chasing one another. How does the snow look when it is on the ground? Very pretty, and on the trees it looks prettier still. Yes, when it has been snowing all things are white, and if the sun shines through the trees you will see the pretty glitter on all the branches. Do you like to go out when it has been snowing? Why? To play with it. What do you do? Make snowballs and throw them about. What do the big boys do? Sometimes they make snow men, and sometimes they roll a large ball over and over until it is so large that they cannot move it. How does it make your hands feel? At first very cold. Yes, but if you run about you soon get warm. What ought you to do after you have been out in the snow? If you look at your boots what do you see? Yes, they are wet, and this wet goes through your boots to your feet, and if your feet are wet what generally happens? We catch cold.

Yes, unless you take your boots and socks off and rub your feet well.

Some little boys and girls do not like feeling so cold, so they bring the snow to the fire. What happens then? The snow melts. What do you mean by that? The snow turns into water. What makes the snow melt? The fire. You see, then, if you want to play with the snow you must not mind going out in the cold. And if you put your thick coats and scarves on and run about you will get warm. Sometimes after it has been snowing the weather keeps very cold, and then what happens to the snow on the ground? It gets very hard, and we can walk on it without sinking into it. What happens to you then? We sometimes fall down. How is that? The snow is slippery, like ice. What do the big boys do? They run along and slide over the snow. The teacher might here show a picture of a sleigh, and describe what fun the boys have in very cold countries, and how the snow helps the people to get about from place to place.

Sometimes, when it has been snowing all day, you go to bed and think you will have such fun in the morning with the snow—then when you get up and look out of the window you see the sun shining but no snow. How is that? Where has it gone? It has thawed. What do you mean by that? How does the snow look when it thaws? It looks very dirty and makes the roads very muddy. Who clears away the dirty snow? Yes, you see men and boys with brooms and shovels. They knock at the doors and ask the people inside the houses if they want their paths cleaned. What must you give these men and boys? Some money. If the snow has been on the ground some time and been walked on it is very hard to clear away, but if it has only just fallen it is easily swept away.

How can we tell when we are going to have a snow-storm? The clouds are very thick and dull, and it feels very cold. What do we generally get from the clouds? Rain. Yes, but sometimes when it is very cold, before the clouds turn into rain, they become frozen and in this way snow is formed. You will have to learn more about this when you are older.

You have never thought that the snow is very useful, have you? Well, when the snow falls it keeps the ground warm, and the plants that are in the ground are then able to stand the hard frost. If the plants were frozen they would die. Then when the snow melts the water goes into the ground, and this gives the plants food, and makes the ground better for the flowers, etc., that grow in the warm weather.

SECTION IV.—COMMON EMPLOYMENTS.

THE POSTMAN.

Now, children, we are going to talk about the postman. Who is the postman? The man who brings us letters. How do you know a postman? By his dress. Tell me what kind of clothes he wears. He has dark-blue cloth clothes with a little red on them. Where is the red? His trousers have a red stripe on the outside. Then he has some on his coat-collar and also on his coat-cuffs. What about his hat? He wears a peaked cap, and this also has some red on it. Have you not seen something else on his cap? Yes, there are some letters and figures. Who can tell me what letters are on the postman's cap? He has G.P.O. on it. I do not expect you know why the postman has these letters on his cap, so I will tell you. There is a very large post-office called the General Post Office, which is the largest in England. He has these letters to show that he belongs to the General Post Office. Then the postman has letters on his coat-collar. Have you ever noticed any? Sometimes you will see N., sometime S., sometimes E., and W., and a few others. Who can tell me what these letters mean? That is quite right, N. stands for North, S. for South, E. for East, and W. for West. The postman who has N. on his collar takes the letters to the north of London, the one who has S. has to go to the south of London, etc.

London is divided into ten parts, and there are different postmen for each part. Now tell me how many different sets of postmen there are? Ten. How many letters did we say? Four. What were they? North, South East, and West. Yes; then how many more do you want? Six. We will write the letters on the slate, and another day you must try to learn all about them. The letters are N.E., S.E., N.W., S.W., W.C., and E.C.

What does a postman carry with him? A bag. What does he put in the bag? The letters, and he generally has one packet in his hand. What does he do with them? He leaves them at the different houses. How do you know when the postman comes to your house? He gives a postman's knock. Show me how the postman knocks? Yes; it is quite different to any other knock. What kind of knock do you call it? A sharp double one. How does the postman walk along? Very quickly. Why? Because he has a great many letters to leave, and he must make haste, for we do not like our letters to be late. Has the postman any other work to do besides going out with the letters? What is it? He goes to the letter-boxes to collect the letters. Where are the letter-boxes? In the streets. What are they like? Large round red posts, with a hole near the top to put the letters in. How does the postman get them out? He opens a large door, and then they fall into his bag. Does the postman get the letters from any other place? Yes; sometimes the postman goes to the post-offices. Where are they? At different shops. What kind of shops? Stationers', grocers', and tobacconists'. Yes; then there are the large post-offices that are only used for post-offices. There is one of these large post-offices in each district in London. How many districts did we find out? Then there are ten district post-offices, besides that very large one I told you about. What is that called? The General Post Office. Now, you said the postman collects the letters. What does he do with them? He takes them to the district office, and there the letters have to be sorted. What do I mean by sorted? Yes, that is right; a great many people put their letters into the post, and they are sent to different places. Now, the postman could not take them all to their right places. Why not? Because he would be too long, and he would be tired. So the letters are sorted. All the letters for

London in one place; those for different parts of the country in others, and so on. Those for London are sorted for each district, and the postman has the letters for a few streets only given to him. Before they leave the office they are marked so as to show they have been through the post-office. The country letters are packed in sacks, and carts take them away. Who has seen the post-office carts? What colour are they? Do you know what we call them? We say they are mail carts. Where do you think the mail carts take the letters? To the railway station. Yes; and they are taken into the country by the train. Some of these trains are called mail trains, and there is a separate carriage for the letters. If you were to peep into one of these carriages you would see the postmen sorting the letters. When they come to the stations they leave the letters for that part of the country, and then get the next packet ready; so you see these men are very busy. Do you know how they fasten the bags? Yes; with a piece of string. They also put some sealing-wax on them and then stamp them.

Do you know who is the postman's master? That is right? he is one of the Queen's servants. I dare say you have seen something written on the letter-carts. What was it? Two letters, "V.R." Yes; and two words, "Royal Mail." These letters and words all show that they belong to the Queen.

Now I want you to tell me what kind of man the postman ought to be. He must be quick. Why? What else? What must he do before he takes a letter to a house? He must *read* the outside. Yes; we say he must read the address. Then if the people have moved away, he has to *write* something on the envelope. Do you know what he would write? He writes, "Not known," or "Moved away." Then, you see, a postman must be able to read and write. The postman has many letters to carry, and sometimes there are other things in the letters. Tell me something we send in letters. Money, pictures, etc What kind of man must the postman be to have charge or these things? He must be honest. Yes; we have to trust him very much, but then we all must be honest. Cannot you think of anything else? He must be clean and very careful.

There are a few ways in which we can help the postman. Can you tell me any? What should we do when we hear the postman's knock. Run quickly to the door, so that the man does not have to wait. Then you told me that he has to read the addresses on the envelope, so what should we do to help the postman? Write very plainly, and be very careful to put the right name of the street and the number of the house. Sometimes the house has a name instead of a number, and we must be sure to put the right name on the letter. How does the postman manage to read the addresses at night? He has a lantern. Yes; and this also helps him to see the numbers of the houses.

SECTION III.—SCENES OF COMMON LIFE.

THE RAILWAY STATION.

Apparatus:—Picture of station, model showing railway and station with engine and carriages; a few tickets.

What part of the year do you have the longest holidays? What do you do in your holidays? Some of you play in the parks and in your gardens, and some go into the country. Now I want those who went into the country for the last holidays to answer me, and tell all the other little boys and girls about what you saw. How did you get into the country? Yes, you had to go in a train, and the train runs along the railroad. Can any of you tell me how the railroad is made? Of what is it made? Of long pieces of iron. Yes, these pieces of iron or steel are called rails. Teacher, showing the model, would direct the children's attention to the way the rails are laid on the long thick pieces of wood; and if a good model is being shown the shape of the "chair" should be pointed out, and the way the chairs are fastened to the "sleepers" should also be shown to the children. The rows of rails are called lines. How many lines of rails do you see? Four lines. How many does the train run on? Two lines.

For what are the other two? For the trains running the other way. Yes, it would not do for them to run on the same lines. Can you tell me what would happen if they were to run on the same lines? The trains would meet together. The teacher might here allude to accidents caused in this way. Where else do you see lines of rails? In the streets. What do you call them? Tramways. Do the engines go on them? No, the trams are pulled along by horses. The teacher might here show the advantage of engines over horses, and also the danger of using them in the streets.

You have told me all about the railroad, and now I want you to tell me about the train. What is the first part of the train called? The engine. What does this do? It pulls the carriages along. Now look at the engine (picture or model to be shown); tell me some of the parts of it. The chimney, the boiler, the tender, the large fire. Yes, you see there is smoke coming out of the chimney? What comes out of the boiler? You do not know; well, when the kettle boils what comes out of the spout? Steam. Well, that is what comes out of the boiler, and it is the steam that makes the engine pull the train along. What can you see in the tender? The coals. For what are they used? To make the large fire boil the water. What do we call these large fires? Furnaces. How many men are there on the engine? Two. What would you say of them? They look dirty. What makes them dirty? What work do they have to do? Yes, one of them is called the engine-driver, and the other one is called the fireman or stoker. What has he to do? He has to keep up the fire. What would happen if the fire were to go out? The water would stop boiling, then there would be no steam, and then the train would stop. You see, therefore, that the fireman has to be very careful to keep up a good fire. Then he has to help the engine-driver to clean and oil the engine. If you were often to see an engine you would see the man with his large oil-can oiling the different parts. You must learn more about the engine another time.

What did you tell me comes after the engine? The carriages. How are they joined to it? By thick chains. Now look and tell me if all the carriages are alike. No.

Some are very much nicer than others. What do we call those very nice ones? First class. How many other kinds are there? Generally two others. We say there are first, second, and third class carriages. Which do you ride in? Why do you not ride in the first class? Now, quite at the end of the train there is a carriage into which you are not allowed to go. Do you know the use of this? Yes, it is for the guard. Who is the guard? What does he have to do? He is in charge of the train. He has to see that all is right. Very often there are two guards to each train. Do they both go into the same carriage? No, one is at the end of the train and the other is in front next to the engine. Do you know what the guard's carriage is called? Yes, the brake. If you were in the brake with the guard you would see that he turns a wheel just before the train comes to the station. This wheel is joined by a chain to pieces of thick wood near the wheels of the carriages. These pieces of wood then stop the carriage-wheels from turning round, and this helps to stop the train. You would also see large windows at the back and sometimes at the top of the brake. The guards look out of these windows to see if all is right.

We have been speaking about the train, and now I want you to tell me what we have to do if we want to go in the train. If you were going to the train to what place would you go? To the railway station. Yes; and when you get to the station what do you have to get? A ticket. Where do you get that? At the ticket-office. Yes, you go to the little window and look through. You see a man inside, and he gives you the ticket. What do you give the man? Some money. Why do we have to give him money? To pay for our ride. Why does he give you the ticket? To show that we have paid for the ride. If you look into the office you will see a large number of shelves and piles of tickets. Did you notice what the man did to the ticket before he gave it to you? Yes, he put it in a machine. This little machine prints the date of the month upon it. Mary says the man cut the ticket with the scissors. Why did the man do that? Because she is a child. Yes; children only have to pay half as much as men and women, and so they have half-tickets.

What have we to do next? Go on to the platform. Yes, but before we go on to the platform we have to show our tickets to a man. What does he do to them? Why? To show that he has seen them. What did he use to clip the tickets? A pair of pincers. They are something like pincers. What do we do next? Does the train come on the platform? Where then? By the side. On which part of the platform ought we to stand? On the part farthest away from the train. Why? What do you see on the platform? There are some seats. Why are they here? For people to sit down while they are waiting for the train. What else do you see? Sometimes there is a book-stall. Why do they have book-stalls on the platforms? For the people to buy books and papers to read in the train. Sometimes there is a refreshment room. What is the use of this? Can you tell anything else you see on the platform? Well, what do you call these men? They are called porters. What have they to do? They open and shut the carriage doors, and answer any questions that they are asked about the trains; they carry the luggage, and they have to keep the station clean. How can you tell the porters? By the clothes they wear. Do the porters always stop on the platform? No; sometimes you cannot see one. Where are they? They go into a room on the platform. May you go there? No. Are there any rooms that you may go in? Yes. What are they called? Waiting-rooms. When must the porters be on the platform? When the train comes in. What do you do then? Wait until the train has quite stopped, and then get into a carriage. What happens then? The porter shuts the door. When does the train start? Yes, you hear a whistle. Who blows it? The guard. The engine-driver, when he hears it, lets off the steam whistle, and turns on the steam, and off goes the train. Where does it stop? At the next station. When it gets to your station what do you do? Sit still until the train stops, and then we get out on to the platform. What do you do before you leave the station? Give the ticket to one of the porters who is called the ticket-collector.

Note I.—The station-master has not been mentioned. The teacher might tell the children that at every station there is a head man, called the station-master, who has to see that the porters do their work, that the train starts at the right time, etc.

Note II.—The signalman and his work would almost form the subject of a separate lesson.

SECTION II.—PHENOMENA OF NATURE.

FROST.

When we talked about the rain the other day, you said you liked it to come sometimes. Will you tell me when it is that you like the rain? That is quite right, when it has been hot we like the rain to fall. Why? Because it makes the air cool. When do we have very hot weather? In the summer. Then it is in the summer that you like the rain. Which part of the year do we have most rain? Yes, we have very much more rain in the winter than in the summer. What kind of weather do we have in the winter? Cold weather. One winter's day it had been raining very much; the gutters were full of water, and a tub and some pails in the garden also had water in them. All that night the wind blew, and it was very cold. In the morning when I went out I felt very cold; the pavements were dry, and instead of water in the gutter, I saw something that I could stand on. It looked very bright, and was very smooth. Do you know the name of it? Yes, it is called "ice." How did the ice get there? Well, listen. You know there was water in the gutter, and that the weather was very cold. Well, this cold weather turned the water into ice. I went into the garden afterwards, and found ice covering the top of the tub and pails, and I found the water in the water-jug frozen. What do we mean by frozen? We mean the water has ice on it. Now, if I wanted to get some water uot of the tub, what should I have to do? You would have to break the ice. What should I find? The water under the ice. What can you tell me then about the ice? It is at the top of the water. Yes, the water only freezes at the top. Sometimes the ice is very thin, and sometimes it is very thick. Can you tell me why this is so? It is thick when the weather is very cold. Yes, and if the weather keeps cold, the ice gets thicker, and it is then very hard and strong.

Where is the water kept that we use in the house? In the cistern. How does it get into the cistern? Through little pipes from the street. Can you see the pipes in the street? No, they are under the ground. Yes, they are very large, and being in the ground the water does not freeze. The water in the small pipes, however, often freezes; and then what happens? The cistern is empty. What do you have to do then? Mary says her mother asks the lady next door. Perhaps the lady next door is without water, and then what do we have to do? We must look out for the man who puts a pipe up in the street. Yes, the turncock puts a pipe in the street, and then the water comes up out of the big pipes under the road. What do you do then? Our mother or big brothers and sisters take the pails, and cans and jugs, and get them all full of water. What does your mother do? She sees that everything is full of water; and she will not let us play with it. No, we must all be very careful indeed when the frost is hard. Do we use much water? Tell me some of the things for which we want water. We want water for washing ourselves, our rooms, our clothes, and things we use; for cooking some of our food, for drinking, etc. Yes, you see then it is very awkward to be short of water. Does it always rain before it freezes? No, sometimes it is quite dry. How can we tell it is freezing? By the cold weather. And any other way? The ground gets very hard, and if there is any water about, it gets covered with ice.

I daresay some of you have seen the water in the parks. What do we call this water? Ponds and lakes. Well, sometimes when it is very cold these lakes and ponds are frozen over with thick ice. Do you know what some people do then? Yes, they go on the ice, and slide and skate. They like this very much indeed, and it keeps them very warm. The teacher might here point out the difference between sliding and skating and should it be convenient, a pair of skates should be shown to the children.

Do little children go out when it is freezing? Yes. What do their mothers do to them? Wrap them up in very warm clothes, and tell them to run about. Why must they run about? To keep themselves warm. Sometimes I see little children crying, but that is because they walk or stand about instead of moving about quickly. Do you know any good games for cold weather? Tell me the names of them. The teacher should here caution the children about the danger of making slides on the paths, etc. Have you ever seen cabmen and other men that drive horses beating their arms in the winter? Show me how they do this. Why do they do it? Because they are cold. Yes, they have to sit still and drive, and therefore they get very cold unless they move their arms about.

Sometimes the frost looks very pretty, especially in the country, on the grass and trees. The frost covers the branches with white, something like snow, but there is only a little of it, and it is very fine. When the sun shines the branches seem to sparkle, and look very pretty. It looks just as if the trees were covered with powdered glass. You might think it was fine white sugar.

One morning after the frost had lasted for a long time, the weather became warmer, and your mother turned on the tap, and found little drops of water coming out. After a time these drops came quicker and quicker, and at last the water began to run out again like it did before the frost came. Then she went into the garden, and found the ground was softer. Can you tell me what made the water run again and the ground get softer? Yes, the warm weather. Yes, we say it is the *thaw*, and we always have this after a frost. When does the frost go away? When the rain comes, or when the weather gets warmer. Does the frost always come in the winter-time? Do you know what we call the time when the flowers begin to come on the fruit trees? Yes, the spring. Sometimes the trees are all full of bloom, and the farmers think they will have a fine fruit season, but the frost comes back, and then what do you think happens? It freezes the blossom. Well, we do not say the blossoms are frozen; we say the frost kills the blossom, and that means that the blossom will not turn into fruit.

SECTION III.—SCENES OF COMMON LIFE.

MARKETS.

I. **Introduction.**—The teacher should question the children as follows:—Where do you buy meat? At the butcher's shop. Where do you buy potatoes, greens, apples, oranges, etc.? At the greengrocer's. Where do you buy fish? At the fishmonger's.

II. **The Markets.**—Now, can you tell me where the butcher gets all the meat he has to sell? From the market. And where the greengrocer gets his fruit and vegetables? And where the fishmonger gets his fish? Yes, that is right, they all get their things from the market. Do they all get their things from the same market? No; the butcher gets meat from the meat market, and the fishmonger gets fish from the fish market, and the greengrocer gets fruit and vegetables from another market. Can you tell me what a market is? Well, it is a very large place with a great many shops in it; the shops are quite close together, and in the meat market every shopkeeper sells meat; in the fish market every shopkeeper sells fish. Why do the shopkeepers go to the market to buy the things they sell? Because they can buy enough to fill their shops—as much as they want. Could the butcher go to a shop and buy so much meat? Then he can get the meat very much cheaper at the market—if he were to buy it at a shop, he would have to pay just the same money for it as he would have to sell it for. That would not do at all. Why not? Because he would have all the trouble of fetching the meat and selling it, and would gain no money.

Do any other people buy at markets besides those who keep shops? Yes, any one any go into a market and buy. When do the shopkeepers go to buy? Early in the morning, then they have their things ready in their shops for people who wish to buy them; but other people can buy in the daytime in the market. Why does not everybody buy at the market? Because it is too far off. Is it "too far" from everybody? No; some people live near the market, and they generally buy at the market. Why; Because they get their things cheaper.

Now, you have told me that shopkeepers get their things from markets; I wonder if any one knows from where the people in the markets get them. Well, I will tell you. Do you know what the men who keep a great many sheep and cows and bullocks are called? No, they are not butchers. What do the butchers have done to these animals? They are killed for them to sell. The men who keep these animals until they are ready to be killed are called farmers. Do you know where these men live and look after their animals? In the country. Yes, they have very large fields where they grow grass, corn, and other food for the cattle. The farmers send the animals to the cattle markets, and the butchers buy them, and when killed they are sent to the meat market. Sometimes the animals are killed in the country, and then they are sent to the meat market, instead of the cattle market.

Now, can anyone tell me from whence the fish comes? From the sea. How is it got from the sea? What are the men called who catch fish? They are called fishermen. These fishermen catch the fish, and send it to the market, and the fishmongers go there to buy it.

Perhaps someone can tell me where the fruit and vegetables come from. Yes, they also come from the country. If you go into the country you may see large fields of potatoes, other fields of cabbages, others of peas, others of strawberries, and other things sold by the greengrocer. Sometimes you see some trees with apples on them, some with pears, and some with plums; under these trees you will see bushes with gooseberries, currants, etc., growing on them. What is the man called who looks after all these things? A gardener. What does the gardener do with his things when they are ready for use? He sends them to market. If the market is not too far away, the gardener packs his vegetables in very large waggons. I saw some very large waggons the other day packed quite full of cabbages, and not only in the waggon, but a long way up above. How do you think the men keep these from falling off? Yes, they were tied round very firmly with rope. The waggons were going along very slowly, because they were very heavy loads for the horses. They start in the evening, and go on walking all night, then they get to the market very early in the morning, ready for the shopkeepers who come to buy.

III. **Principal Markets of London.**—Now I should like you to tell me the names of some of the markets in London. Yes, the meat market is one, but that has a name. Does any one know what it is? It is called Smithfield. Has any one been to Smithfield? What do you see there? That is right. Meat, fish, poultry, bacon, and cheese. What do you mean by poultry? We get all these things at Smithfield, but you must remember there are really three markets here—one for meat, one for fish, and the other for poultry, bacon, cheese, etc. I dare say some of you have seen a great many carts full of hay at Smithfield. This is called the hay market.

Can you tell me of another market? Yes; there is another fish market called Billingsgate, and another one called Columbia Market, but fruit and vegetables are sold in Columbia Market as well as fish.

Do you know the name of a fruit and vegetable market? Yes; there is one called Farringdon Market, and there is a very much nicer one called Covent Garden. Has anyone been to Covent Garden Market? What did you see? Then there are some markets where potatoes only are sold. These are called potato markets. There is one at Spitalfields. Does anyone know where the cattle market is?

Then there is Cumberland Market for hay and straw, and the Corn Market at Mark Lane.

The names of the markets should be written on the blackboard; and if the children have had lessons in elementary geography, the map of London should be placed before them, and the position of the markets pointed out.

SECTION IV.—COMMON EMPLOYMENTS.

THE SHOEMAKER.

I. **Introduction.**—What covering do we have for our feet? Boots and stockings. Why do we wear these? To keep our feet warm. What is the use of stockings? To keep our feet and legs warm. Would you like to go into the streets with only stockings on your feet? Why not? They are not thick enough to keep out the cold, and they would let the wet through, and if we were to tread on a stone it would hurt our feet. The boots do not let water through, and they are hard, so that if we tread on a stone it does not hurt us. Now we are going to talk about the boots to-day.

II. **Materials and Tools used.**—You see I have a boot for you to look at, and what is this? A shoe. Of what are they both made? The children should then repeat, "Boots and shoes are made of leather." What is the man called who makes boots and shoes? What must he have in order to do his work? He must have tools. I have some of the shoemaker's tools on my table, you shall tell me all you can about them. The teacher might then point to the different tools, and if the children do not know them, tell them their names and write them on the black-board.

Now, perhaps some of you could tell me how the shoemaker uses these tools. Who has ever seen a shoemaker at work? What was he doing? Well, John, you say you saw him hammering. What was he hammering? The heel on a boot. Was the heel ready-made, and the man hammered it on? No; he nailed one thin piece of leather on, then another piece on that, and then others until the heel was high enough. Who can show me the heel of this boot? Can you see the different layers of leather? Did you see, John, what the shoemaker had inside the boot while he was making the heel? What shape is the last? Can you tell me the use of it? Yes, the shoemaker always puts it inside the boot he has to hammer nails in. It would be very awkward to hammer the boot without something firm inside. Have you ever seen the man put a sole on a boot? That is done much in the same way as the heel is done, but there are not so many layers of leather as in the heel.

Mary says she saw a shoemaker sewing. Did you notice what he did to the thread before he used it? He rubbed something on it. Well, here is the something; what is it called? Why does he rub the wax on the thread? It makes it very much stronger. Have you ever seen anyone else use wax? Yes, sometimes your mothers do, if they want their work to be very strong.

For what does the shoemaker use the pincers? Show them to me. Now show me the awl. What is the use of it? The man makes holes in the leather with the awl, and then he puts his needle through. Why does he not put the needle through at first? Because the leather is too hard.

What are these little things called? Pegs. Of what are they made? For what are they used? Instead of sewing the boots, men sometimes peg them; that is, they hammer the soles on with these little pegs. Which are the stronger, sewn or pegged boots? Yes, the sewn are the stronger, and we generally have to pay more money for them.

What is the use of the knife? To cut the leather. Have you ever seen the bootmaker use paste? What did he do with it?

Now, I must tell you that it is very seldom that one man makes a boot entirely himself. Generally, different parts are given to different people to make. Some parts are made by women. What do we call this part of the boot? The uppers are generally made by women, and they require other tools besides those we have mentioned, but those you must learn about another day. Some shoes are bound like this (showing a shoe); this is done by women, and the inside of the boot, the lining, is also done by women.

When the different parts of the boots are made, they are put together by men.

SECTION II.—PHENOMENA OF NATURE.

THE SUN.

When do you go to bed? How long do you stay in bed? All night. Why do you not go to bed in the day-time? Because it is light, and we can see to run about and play and do our work. What gives us light in the day-time? The sun. Where is the sun? High up in the sky. When do you see it first? In the morning, directly we wake up. It very often wakes us, because it shines so brightly in at our windows. It is shining in the sky very early in the morning, long before some of us are awake. What does the sun look like? A large ball. Do you like to look at the sun? No; it makes our eyes ache. Do you know why it makes your eyes ache? Because it is so very bright. Is the sun always so very bright? No; sometimes we can look at it quite well; but that is when there is a cloud in front of it. Does it always look the same? No; sometimes it is very red, like fire, and another time it is a bright yellow colour, like gold. Do you always see the sun in the same place? I wonder if anyone has ever noticed out of which of these windows he can see the sun in the morning, and which in the evening? That is right; if you look out of this window (teacher pointing to the east) directly you come to school, you will see the sun. Can you see the sun there now? No. Who can see the sun now? You cannot see it at all. Well, I will let Mary go into the playground and look for the sun; then she can come back and tell us where it is. Well, where did you see it, Mary? Over the school. Yes, at this time in the morning the sun is high up in the sky over our heads. Where do you see it the first thing in the morning? Yes; and then it gradually gets up higher and higher, until it is high up over our heads. Does it stay there? No; if you were to watch it you would see that it then goes down lower and lower, until you can see it out of this window (pointing to the west), and then if you still watch it you will see it sink still lower, until it goes quite away, and you cannot see it any more. What happens when it has quite gone? It begins to get dark. Does it get dark all at once? No; it is light at first, then it gradually gets quite dark. What are all little girls and boys doing when it is dark? Yes, they are all sleeping. When will they wake up? In the morning.

All look at the window out of which we see the sun in the morning. Now, that part of the sky where we see the sun in the morning is called the east. We say "the sun rises in the east." The children should here repeat, "The sun rises in the east"; they should also be made to point to the east. Now look at the window out of which we see the sun in the evening. What did I tell you the sun does in the morning? It rises, and then it gets higher and higher, until at midday it is over our heads. What does it do then? It goes down lower and lower until we lose sight of it. When does it do this? In the evening. We say the sun sets in the evening, and the part of the sky where it sets we call the west. The children should then repeat, "The sun sets in the west." Point to the west.

You told me that the sun gives us light; there is also something else that we get from the sun; do you know what it is? How do you feel if you stand in the sun? We feel very hot. What makes you feel so hot? The sun. Then the sun gives light and heat. Do you know what good this heat does to the flowers and fruit in the fields and gardens? It makes them grow. Yes, it makes the fruit and flowers grow, and then it makes the fruit and corn get ripe. Do we like all these things to get ripe? Why? They are all things that we eat, and we cannot eat them until they are ripe.

If you put your mother's butter in the sun, what happens to it? And if the sun shines when there is ice or snow on the ground, what happens to it? The heat from the sun makes these things soft; but what does it do to the mud in the road? It makes it quite hard. Then you see the heat makes some things soft, and others hard. The children should name some of these things.

If you go out when the sun is very hot, how does it make you feel? Very tired. Yes, and it often makes your head ache. Do you know what you should be very careful to put on when you go out in the sun? Yes, you must never go out in the sun without putting on your hat. Some people who are obliged to work in the sun all day have very bad head-aches, and sometimes they are very ill and die. We say they have sun-stroke. Would you like to have sun-stroke? Then what ought you to be very careful about?

Which part of the year is the sun the hottest? And when does it shine for the longest time? Sometimes in the winter we do not see the sun all day, sometimes for two or three days. Where is the sun then?

There is one day in the summer that we call the longest day, because the sun shines longer on that day than on any other. And there is one day in the winter called the shortest day, because the sun does not shine so long on that day as on the others.

An exercise should then be given on the position of the cardinal points and how they are determined.

SECTION III.—SCENES OF COMMON LIFE.

A GARDEN.

The teacher should begin to question the children about their homes as follows:—How many of you have a garden? Where is it? We have two. Where are they? One in front and one at the back of the house. Have you all two gardens? No. Some of you have only a garden at the back of the house, and some have them only in the front. There is one little boy who says he has not any garden. So you see some of you have two gardens, some have one, and some have none at all.

Are all your gardens the same size? No; some are very much smaller than the others. Do you like to have gardens to your houses? Why? We like to play in them, and to see the flowers. Yes; they are very nice to play in. Now, I want you to think about your gardens, and tell me what you do in them. Well, one little girl says she only plays in hers, but Mary says she puts flowers in hers. How many of you have flowers in your gardens? Do you put the flowers in yourselves? No; our father sees to them. Yes; and he does not like you to touch the flowers. Why not? Because we might spoil them. Some little boys and girls have a piece of garden all to themselves, so they can put in what they like. Now, will you tell me the different parts of the garden? The paths. For what do we use them? For walking on. But may you not walk on all parts of a garden? On which parts must you not walk? On the beds. Which are the beds? Those parts that have things growing in them. Then we have found out two parts of the garden—the paths and the beds. What is there all round the garden? A wall or fence. What is the use of this? That is right; it separates one garden from another, so that each person has his own garden. What do we often have in the middle of the garden? Some more beds or some grass. Yes; we have the grass plat, the paths, the flower beds, and then the walls. Will you tell me of what the paths are made? Generally of gravel. What has to be done to the paths to make them nice? They have to be rolled. What does this do? It makes them hard and smooth. What does your father use to do this? A garden roller. Can you use the roller? No; it is too heavy. Would it do if it were light? No; it would not make the paths hard. Sometimes pieces of grass grow in the paths, and these you must pull up directly, for they spoil the look of the walks. If you have a grass plat in the middle of your garden, what has to be done to it? Yes; the grass has to be cut, and rolled also just like the gravel. If the grass is not kept cut it grows very long, and then looks very untidy. Do you know another name for a grass plat? Yes; it is called "a lawn."

Now tell me some of the flowers that you have in your garden. Geraniums, marigolds, nasturtiums, fuchsias, sunflowers, mignonette, etc. Some time ago we had daisies, crocuses, daffodils, and tulips, etc. Yes; they are all very pretty when they bloom. Do you know what your father did to make these flowers come? Yes; he put little seeds into the ground, and then the seeds gradually grew into the plants. Do you not think it very wonderful that these plants should grow out of those little seeds? Did your father sow seeds for the geraniums and fuchsias? No; he put small plants in the ground, and they grew into the large ones we now have. Where did he get them? From the gardener. Yes; some day we will have a long talk about the gardener. You must be very careful when you play in the garden not to break the flowers or dig up the paths. And you should not leave your toys about the garden, for they make it look untidy.

Now I expect some of you have seen other things growing in the garden besides flowers. Well, Harry, what do you say? I have seen onions, potatoes, and cabbages. And you, Tommy? Apples and pears. What do we call the things Harry named? Vegetables. And those Tommy named? Fruits. Do you know what kind of garden we call the one where vegetables and fruits are grown? Yes; a vegetable garden. And what do we call the one we first talked about? A flower garden. Which is generally the larger? The vegetable garden. Why do people plant vegetables in their gardens? Do they look pretty? They want them to eat. Do the apples and pears grow on plants like the cabbage, potato, etc.? No; they grow on trees. Yes; and so do plums, cherries, etc. Then there are some things that grow on bushes? Can you tell me some? Currants, gooseberries, and strawberries. No, strawberries do not grow on bushes; they grow close to the ground on little plants. You see, then, that the vegetables grow on plants, and some of the fruit on trees, and some on bushes, while one little fruit grows on a plant. What is its name? The strawberry.

The teacher should recapitulate the parts and uses of a garden and the different things seen in a garden.

SECTION IV.—COMMON EMPLOYMENTS.

THE BUILDER.

A lesson on the builder will really be an introduction to a course of lessons comprising the following trades: bricklayer, carpenter, glazier, painter, plumber, etc. The teacher, therefore, instead of entering fully into particulars, which would be given under each trade, should see that the children recognise the different sets of men engaged, and the materials individually used by them.

Now, children, we are going to talk to-day about house-building. What do you call the man who builds houses? Probably to this question the teacher would have the following answers: carpenter, bricklayer, builder, etc. She would have to tell the children that the man who sees to the whole of the house is called a builder, and that the carpenter, bricklayer, etc., only do certain parts of the house. The teacher should then repeat the question, What is a builder? so that all the children should answer it properly. The builder gets men to come and work for him. What does he give them? Money. What do we call this money? Wages. Do the men all do the same work? Oh, no. Some men are bricklayers, others are carpenters. Now, I will be a builder, and you shall help me to build a house. What shall we first have to do? Build the walls. Not at first; we shall have to dig out the ground. Do you know why? Well, I will tell you. The house would fall down if we tried to build it on the top of the ground. First of all, we must get some men to dig out some of the ground. Then the men would come and build the walls. What do we call these men? Bricklayers. Why? Because they lay the bricks on each other. Are houses always built of bricks? No; sometimes they are made of stone, and also of wood. Well, Harry, what do you say? Sometimes part of the house is stone and the rest of bricks. We must not forget to leave some large holes in the walls. Do you know why we leave these holes? Yes, for the windows. The woodwork of the windows is put in while the bricklayers are building the walls. Then the thick pieces of wood on which the floors are made are put down. What do you call the men who do this work? Carpenters. What else do they do? They nail the floors down and put in the doors. And anything else? Yes, the stairs. If you go to a house when the men are only just beginning, you will not see any stairs. How do you think the men manage without the stairs? They use ladders, and also long poles with boards. Yes, we call these poles and boards the scaffolding. I think that is a long word for you; but you must think of it as three small ones—scaf-fold-ing. Now, what do you mean by the scaffolding? Do you think the carpenters made your school stairs? No. Why not? Because they are made of stone. What do you call the men who do the stonework? They are called masons. Can you tell me what they do in the house? They make the hearths, mantelpieces, and the steps. When the carpenter has finished the windows, what else has to be done to them? The glass must be put in. Who does this? The glazier. Yes, he puts glass in all the windows. Where else do we have glass? In some of the doors. What do we call the top of the house? The roof. Who makes the roof? You do not know; well, look at this model. What are these? They are slates. Yes; and the man who does this work is called "a slater." Have you seen anything else used for the roof? Yes, sometimes tiles are used. The teacher might tell the children that in some places straw is used for the roof, and sometimes lead, iron, or zinc.

Now the house is built; but I do not think you would like to live in it yet. What has to be done to it? What colour is the wood? White. Do you live in a house with the wood like this? No; the wood is painted. Well, then, who shall we have in the house now? The painters. They will have a great deal of work to do. Then, while they are doing their work, we have the men in to make the walls look nice. What do we put on the walls? Paper. And what do you call the men who put the paper on the wall? Paper-hangers. But we have forgotten the ceilings of the rooms. These are done before the painter and paper-hanger come. Now I will show you how they are made. Do you remember the thick pieces of wood to which the floors were nailed? Well, under the floor comes the ceiling of the room below. Thin strips of wood called laths are nailed to these thick pieces of wood, and then the plasterer comes and puts the ceiling on. The teacher should here show some plaster. When this is dry, the whitewashers make it nice and white. And now the house is nearly ready. The bell-hangers come and put in the bells and the wires. Why are wires wanted? Tell me something else we want in the house. Water-pipes. Who sees to this? Men called plumbers. Yes, and they do some of the work before the painter comes. And what else do we want? You do not know. The builder has to send the locksmith. What has he to do? He sees to all the locks. Then the gas-fitter is wanted; and there are many other things that the builder has to do before the house is finished. So, you see, the builder must not be lazy, and he must keep coming to the house to see what is wanted next.

Summary.—The children should be asked to name the different sets of men employed, viz.:—Bricklayers, masons, carpenters, slaters, glaziers, plasterers, whitewashers, painters, paper-hangers, bell-hangers, locksmiths, plumbers, and gasfitters. Then the various materials used should be written down after the children have mentioned them. For a recapitulatory exercise the children might write the different trades on their slates, and against them the materials used by the workmen. This could be done from memory, or from the summary on the blackboard.

THE BRICKLAYER.

Apparatus:—A good picture, showing the man at work, and some of the tools with which he works. A brick, sand, lime, hair, trowel, model of hod, small rule and plumb, and a small level.

Now, children, we are going to talk about the man who makes the walls of the house. Of what does he make them? Of bricks. What do we call the man? A bricklayer. Why? Would you like to know how he puts the bricks together?

Who has ever watched the bricklayer at work? Does he use anything besides the bricks? Yes, he has something that looks very much like mud. What does he do with it? He puts it on the bricks, and then puts other bricks on the top of it. And what do we call this? It is called "mortar." And what use is the mortar? It sticks the bricks together. Some day I will tell you how the bricks are made, but now I can only tell you about the mortar. It is not mud; it is made of lime and fine sand. Have you seen the men sifting the sand? Did you see the large sieve standing up? How does your mother sift her cinders? Do the men sift the sand in the same way? No, they have so much to sift. Yes, and it would make them very tired, and take them longer to use sifters like your mother's. They stand a very large one up nearly straight. Look at the picture, and tell me how the sieve is standing. It is on the slant. The men then throw the sand from their shovels against the sieve, and then what happens? The fine sand goes through, and falls behind the sieve. And what falls in the front? All the stones and other things which were in the sand. There is something else the men want to mix the lime and sand. They must have water. Yes; and in the summer time they use more water than in winter. Do you know why? Because the mortar dries quickly when the weather is hot. Then there is something else they put in good mortar to make it stick better. Look at this old dry piece of mortar. See, I am breaking it. It is very hard, and I have to hit it very hard to break it up. Now what else can you see? A great many little hairs. Yes; these hairs make the mortar much stronger. They are scraped off the skins of animals, especially that of the cow.

Of what shape are the bricks? They are oblong. The teacher should here let the children compare the shape of the bricks with the oblong in Gift IV. These they use in building, and call bricks. Of what colour are the bricks? Sometimes they are white, sometimes red, sometimes a light yellowish brown, etc.

We have talked about the things used to make walls, and now you may tell me about the tools the bricklayers use.

Yes, they have a trowel. For what do they use it? To put the mortar on the bricks. Sometimes they want to break the bricks, and then they use the trowel also. The bricklayer holds the brick in one hand, and gives it a quick blow with the trowel, and this breaks the brick. See, here is a trowel. Can you tell me about any other kind of trowel? Yes, the gardener uses a trowel. Is it like this one? Oh, no; it is very different. This one is flat, and the one we use in the garden is partly round. What else have you seen bricklayers using? Yes, he sometimes uses a hammer, but this, again, is different to the carpenter's. Look at this one, and tell me how it differs from the other. It is sharp at one end, like a chopper. Yes, the bricklayer uses it to cut the bricks. Have you seen the men carrying bricks? Show me on this picture what they use. Can you see a small one on the table? Yes, here it is. We call this a hod. Where does the man carry it? On his shoulder. Do you see this nice cushion made of hair and leather? What do you think is the use of it? It keeps the hod from hurting the man's shoulder. Which part does he hold? The long handle. Do you think you could carry a hod full of bricks? It is a heavy load for a man, especially when he has to go up a high ladder. Have you seen anything else in the hod? Yes, sometimes the men carry mortar. On high buildings the builder often has the bricks and mortar pulled up by long ropes, and then the men do not have to carry the heavy hod up the high ladders. Now, the bricklayer wants to know whether his wall is quite upright, so he has something that he can place against the wall, and by looking at it he can see if the wall has been properly built. Would you like to see one of these things? Here is one. We call it a plumb-rule. You see the piece of lead hanging in the middle? This is called the plummet. How is the plummet held in its place? By a piece of string. Well, the bricklayer puts the rule like this against the wall, and then if the plummet swings quite in the middle he knows that the wall is right. Now look at the plummet; it does not swing in the middle of the rule; this shows that the easel is on the slant. When the bricklayer finds the wall thus, he has to alter it. Then the bricklayer wants to keep the rows of bricks on a level, or, as we say, horizontal. Look at the blackboard, and I will show you this long word—hor-i-zon-tal. Now say the word. What does it mean? Show me something that is horizontal. The bricklayer uses a line. It is a long piece of string, with large pins. What are the pins for? To stick into the wall. When he has stretched the line along he uses a little thing like this, called a level, to see if his line is quite straight along or level. What else can you say? Horizontal. Do you see the little bubble inside the glass? When this is in the middle it shows the line is level. See; if we put the level on the table, where is the bubble? In the middle. Now put it on the desk, and then what will you say? The bubble is at the end. Yes, and this shows us that the desk is slanting. There is one other tool used by bricklayers. Have you seen anything like this? Yes, it is a square. Well, the bricklayer uses this for the corners. We want the corners of the walls kept square, You take this square. and put it in the corner of the room. What do you notice? The square fits into it. That is the way the bricklayer uses the square. Do you know what has to be done before the bricklayer begins building a wall? Well, the next time you know there are going to be some houses built, you must go and see what the men do first. That is right. You see, Harry knows They dig out some of the ground, and then they fill in this hole with stones, and beat them down. Sometimes they put some concrete. This looks something like mortar with stones mixed with it. What is this part of the house called? The foundation. Yes, and the builder is very particular about the foundations, for he knows the house will not be strong if the foundations are not well made.

Sometimes you have seen men doing something to the fronts of old houses. Do you know what I mean? Painting them. I mean they were doing something to the bricks. Do they paint the bricks? Well, perhaps you have not noticed, so I will tell you. Sometimes the mortar between the bricks wears away, or gets very loose. The bricklayer comes to put new mortar between the bricks, so as to fill them up. This is called pointing. This makes the walls quite strong, besides making them look clean and new.

The bricklayer always has some one to help him, called a labourer. Do you know what the labourer has to do? Yes, carry the bricks and mortar to the bricklayer. Yes, he has to fetch whatever the bricklayer wants; so that the bricklayer does not leave off to fetch his own things.

Summary.—For a recapitulatory exercise the children might write out a list of things used by the bricklayer, describe them, and name their uses.

SECTION II.—PHENOMENA OF NATURE.

THE MOON AND STARS.

Last week we had a long talk about the sun. Do you remember anything you told me about it? It gives us light and heat, it makes the plants and flowers grow. Yes, that is right. When do we see the sun? In the daytime. Do you ever see it at night? No. Well, I went out last night, and saw something very bright in the sky. What was that? It was the moon. How many of you saw the moon last night? Not many of you; how was that? Yes, you were in bed. Do you know if the moon shines every night? No; sometimes there is no moon to be seen. So, you see, sometimes the moon shines very brightly, and at other times you cannot see it. Now, perhaps, some of you who have seen the moon can tell me something about its shape. It is round like the sun. Is it always round? No; sometimes it has a little piece off one side, sometimes there is only half a moon, sometimes only a quarter, and sometimes only a very little strip. So, you see, the moon does not always seem the same shape to us. When the moon is only a little strip we say it is the new moon. If you watch the moon, you will see that after a few nights it is much larger. The moon goes on getting larger until it gets quite round. Can you tell me what we say of it then? We say it is the full moon. If you had noticed the first day of the new moon, and kept count of the days, you would find that fourteen days had passed while the moon was becoming full. Do you know what happens when the moon is full? It begins to get smaller. Yes, first it gets to half a moon, and then smaller and smaller. How long do you think the moon is in getting quite small again? Fourteen days. Yes, just the same time as it took to become quite round. Who can tell me how many weeks there are in fourteen days? Two weeks. Then, you see, the moon is two weeks getting large, and two weeks getting small. How many weeks is that? Four weeks. What do four weeks make? A month. Yes, we say there is a new moon every month. When the moon is getting smaller we say it is "on the wane." What does the moon give us? Light. Yes, we like to walk out when the moon is shining brightly. The light makes everything look so pretty. Can you look at the moon? Yes, it does not hurt our eyes like the sun. Why not? Because it is not so strong. The light that comes from the sun is of a golden colour, but the light of the moon is white like silver, so that we always talk about the silvery moon and the golden sun.

Very often at night the moon does not shine, and then it would be very dark indeed if something else did not try to give us light. What do you think I mean? The stars. What can you tell me about them? There are a great many stars all over the sky. What can you say about their size? They are very small, some much smaller than others. What else can you tell me? They are very bright and seem to be moving or dancing about. What do we call this kind of moving? You do not know. There is a pretty little song you sing about the stars that tells you what they do. Now sing me part of that song? "Twinkle, twinkle, little star." Well, then, what can you say about the movement of the stars? They twinkle. Do you like to see the stars? Yes, they look very bright and pretty in the sky. Of what colour are they? They are silvery like the moon. Do you see the stars only when there is no moon shining? Oh, no; sometimes we see both the moon and stars. Do you think you could reach the stars? No, they are a long way off. If you were to build many houses, one on top of the other, you would still not be able to touch the sky. It is very far away.

SECTION III.—SCENES OF COMMON LIFE.

MODES OF CONVEYANCE.

I. **The different modes of conveyance to be named.**—Now, children, let us suppose we have a half-holiday. Where would you like to go? To Richmond—Regent's Park—Zoological Gardens. Yes, we could go to any of these places and have a very happy time, but we will imagine we are going to the Zoological Gardens this afternoon. I wonder who can tell me how we can get there? Where are we now? At school. Yes, but where is your school? Near King's Cross. Very well: now we want to know how to get from King's Cross to the Zoological Gardens. Do you know where the Gardens are? In Regent's Park. Who has ever been to the Park? How did you get there? We walked. Yes, you can walk, but it is rather a long way, and it is very much better to ride, then you can play about when you get there without getting tired. Who has ever ridden to Regent's Park? In what did you ride? In an *omnibus*. And you, Tommy? In a *train*. Well, here is one little boy who says he went in his father's *cab*; and that must have been nice, I am sure. Now is there anything else in which you could ride besides an omnibus, train, or cab? Very well, Mary says her father took them all in his *cart* when they went. When I went to the Zoological Gardens last I saw a great many carriages outside the gates. What were they doing there? Quite right; they were waiting to take away the ladies and gentlemen whom they had brought there. Is there no other means by which we can get from one place to another? Well, if you stand by King's Cross station, you will often see people riding in something else that you have not mentioned. Yes, it is a *tram-car*. What are tram-cars like? Yes, they are something like omnibuses, and James says they are something like trains. In what are they like omnibuses? They are drawn along the streets by horses, and they stop when anyone wants to get in. Why did James say they were like trains? Because they run on lines like the trains.

Now, I am quite sure you have all seen gentlemen riding on something that you have not yet mentioned. Well, Mary? I have seen a gentleman on a *tricycle*. And there is something very much like a tricycle; what is that? A *bicycle*. What is the difference between a tricycle and a bicycle? One has three wheels, and the other has two. Yes; it is very easy to remember, because this part of the word means "wheel" (underlining "cycle"), and "bi" means "two," and "tri" means "three"; so that "bi-cycle" means "two wheels," and "tri-cycle" means "three wheels." Haven't you had a word with "tri" in it before? Yes, "tri-angle." What does that mean? The other day I saw a gentleman riding by himself, but it was not on a bicycle or a tricycle. Can you tell me what he was on? He was on a *horse*. We say he was riding horseback.

Now you shall name for me, and I will write them on the slate, the different means by which we can get from one place to another.

We can walk, we can ride in a train, omnibus, tramcar, cab, carriage, cart, on horseback, tricycle, or bicycle.

II. **Advantages of each.**—Which of all these ways of travelling do you like best? One little girl says she likes going in the train best. Why, Bessie? Because the train goes so quickly. Yes, it does; and if we are in a hurry, we like to go in a train. But does the train go to every place that we want to go to? No, the trains only go to stations, and then we have to walk from the station. If we want to ride all the way, what must we go in? An omnibus. Well, Tommy, what are you going to say? The other day I went to my aunt's in an omnibus, and it did not take me all the way. I had to get out and walk. How was that? Because the omnibus never goes down my aunt's street; it always goes along the end of it. Does the omnibus always go the same way? Yes, all omnibuses go the same way every day; so, unless you are going the way the omnibus goes, you will have to walk some part of the way. What must we ride in if we want it to go exactly the way we wish? In a cab. Do you often ride in a cab? Why not? Because it costs too much money. Yes; if you go ever such a little way in a cab, you must pay the cabman one shilling; but you can go a very long way in an omnibus for twopence or threepence. Do you know why you can ride so much cheaper in an omnibus? Yes, that is right; a great many people ride in the omnibus, and every person has to pay the man, so that altogether he gets a great deal; but only one person rides in a cab, and he has to pay all the money himself, even if two or three friends are with him. Now, there is something else in which we can ride a very long way for twopence; what is that? Which do you like riding in best? Why do you like the tram best? It goes much more easily. Can the tram go any way we like? Why not? Yes, you remember you told me before, it has lines to run on, just like the train has. It is the lines that make the cars go so easily. Do you know what makes the omnibus shake so much? Yes, it is very often the rough, stony roads that it has to run along. Which is the larger, the tram or omnibus? The tram is much larger. Does it have more horses to draw it? How is it that the two horses are able to draw the large tram along? The lines make it easy for the horses to draw it; they could not draw the car if it were not for the lines. Why?

III. **Recapitulation.**—Now we have found out that we like riding in cabs, but we cannot do so because they are too dear. Who can ride in cabs? Rich people. In what do very rich people ride? In carriages.

We like riding in tram-cars better than in omnibuses; but sometimes the tram does not go the way we want to go, and then we use the omnibus.

Sometimes we like to go in the train, especially if we are in a hurry, because it goes quickly, and, like the tram and omnibus, it does not cost much money.

Sometimes we are obliged to have a cab, though it is dear. Do you know when that is? Yes, when you are going into the country you have to take luggage with you, and you have to ride in a cab to the station. Why could you not go in the omnibus? Because we cannot take much luggage in an omnibus. Where does the cabman put the luggage? On the top of his cab. Yes, he can carry a great deal of luggage there.

SECTION IV.—COMMON EMPLOYMENTS.

THE CARPENTER.

Apparatus:—Good picture of carpenter at work, and specimens of tools used by him. (A child's tool-box would supply the necessary specimens.) Six pieces of wood properly prepared to form a box, also a rough piece of wood.

I dare say you remember that we had a long talk about the bricklayer a short time ago, and to-day I want you to tell me about another man who helps the builder build the house.

We said that while the bricklayers are building the walls, some other men come and put in large pieces of wood on which the floors are to be made. What did we call these men? Carpenters. What else do they do? They nail down the floors, and put in the doors, and windows, and stairs. Of what are all these things made? They are all made of wood. Then what part of the house does the carpenter do? He does all the woodwork. Does he wait until the bricklayers have finished? No; he is obliged to do some of his work at the same time. The teacher should then let the children repeat the parts of the house made by the carpenters while the bricklayers are at work. Now I want you to tell me the names of the tools used by the carpenter, and for what he uses them. The teacher then, pointing to the pieces of wood, would say, What have I here? Some pieces of wood. Yes, and with these we will try to make a box. How many pieces of wood are there? Six pieces. Do you think the carpenter would get his wood like this, all ready to make the box? What would he have to do? He would have a large plank. What would he do to it? He would have to cut it into the right pieces. How would he get the right length, etc., of the pieces? He would measure it. With what does he measure? The teacher should here show the children a rule, and tell them that the carpenter's rule is generally two feet in length, and hence he calls it a *two-foot rule*. The children's attention should also be directed to the way the two-foot rule folds, and the advantage of this pointed out. Now, Harry, come and show how the carpenter measures the wood. Yes; but what must he do before he takes the rule away? He marks the place. With what? A piece of *lead pencil*. See, here is a piece. Is it like those you use? No, it is much thicker. Then what does he do? He cuts it. With what does he cut the wood? With a *saw*. Come and find me the saw. Do you think you could saw the piece of wood? Well, John thinks he can, but I am afraid he will not be able to, for it is rather difficult to use the saw. Which part must he hold? The handle. Do you know what we call this part of the saw (pointing to the teeth)? Of what is it made? It is made of steel. Now, you see John cannot manage the saw very well—that is why I had the wood cut for you. I had to get the carpenter to do it.

Now let us see if we can find out where the different parts go? Quite right, this large piece is the bottom of the box. Yes, there is another piece like it. Where do you think that will go? Very well; then you have the top and bottom of the box. Now, what other parts have you? Two long pieces. Where will they go? They will do for the sides. And where will these short pieces go? They will do for the ends. We have found out the parts of the box. How shall we put them together? Willy says we might *nail* them together. Another boy says we can *screw* them, and Mary says we can *glue* them. They are quite right; we could nail them, or screw them, or glue them, but we are going to join them another way. Look at the edges of these pieces of wood, and tell me what you see. There are little pieces sticking out. And what do you notice on the other pieces? Little pieces cut out. Yes; these edges have been cut like this. Now look, and I will put these edges together. What do you notice? They fit into each other. Then, you see, this is another way of joining wood. We call this *dovetailing*. The teacher might then show the children how the edge of the blackboard is fastened on to the board, *i.e.* by a *groove* and a *tongue.* A small piece of match-boarding would be a familiar and easy example of this kind of join. The *tenon and mortise* join would be best illustrated by the frame of the cupboard door or the schoolroom door. The names tenon and mortise, of course, would not be mentioned.

Now how do you think the carpenter cuts the wood out for these kind of joins? Yes, he sometimes uses a small thin saw, and sometimes a chisel. Can you show me the *chisel*? You must be very careful when you touch the chisel, for it is very sharp, and likely to hurt you. Who has seen the carpenter using his chisel? With what does he strike it? With a large wooden hammer. Yes; we call this the *mallet*. Now look at this piece of wood, and tell me the difference between it and the pieces used for the box? It is very rough, and the others are smooth. Could the carpenter make it smooth? How? By planing it. What does he use to do this? A *plane*. Show me the plane. Yes, it is a large piece of wood with a piece of sharp steel in it. See, I have taken it out. What is it like? A wide chisel without a handle. Yes, that is right; and I have seen a chisel used like a plane. Now if we wanted to nail our box together, what should I have used to knock in the nails? A *hammer*. Show me the hammer? Of what is it made? A piece of iron with a wooden handle. How shall we fasten the lid on the box? Do you want it fixed down firmly? No, we want it to open and shut. Well, then we must have some hinges. See, here are the hinges; how shall we put them on to the box? We must screw them on. How? With the *screw-driver*. What must you first do? Make some holes with the *gimlet*. Did you use the gimlet for the nails? No; but the screws will not go in unless holes are first made. Why would it not do to nail the hinges on? They would not be strong enough. That is right, the nails would get loose, and then the hinges come off. So, you see, the screws hold things more firmly than the nails do. Sometimes when the carpenter is using nails they do not go in the right way, and he is obliged to pull them out again. What does he use for this? The *pincers*. Show me the pincers. What were you going to say, Charlie? He uses the other part of the hammer. Yes; some hammers are made like this one, and we are able to use it to pull out nails. Do you know what we call the table at which the carpenter works? His *bench.* How many of you have seen a carpenter's bench? The children's attention should be directed to picture of the bench, or a little model might easily be obtained for them to see. Now, the carpenter does not want to hold his wood still with his hands. Why not? Because he wants his hands to work with. So he puts the wood between these two pieces, and then with these long wooden screws he fastens it very tightly. You told me that the carpenter sometimes fastens the wood together with glue. In what does he have his glue? In the *glue-pot.* See, here is one. There are really two pots, one fitting into the other. In which does the carpenter put the glue? In the inner one. And what does he put in the outer one? Water. Why? To make the glue soft when he puts it on the fire. Yes; the glue would not get soft if he put the inner pot on the fire; it would only burn.

As a recapitulatory exercise, the children should write on their slates the names of the tools used by the carpenter, and then name the use of each to the teacher.

The different kinds of joins should be asked for, and the children should also name the different things made by the carpenter.

SECTION II.—PHENOMENA OF NATURE.

NIGHT AND DAY.

Supposing the lesson to be given in the morning, the teacher should begin thus. When do you go home? What do you do? Have our dinner. And after dinner what do you do? We come to school again. What do you do when school is over? We go home, play about a little after tea, and then go to bed. What part of the day is it when you are in bed? It is night-time. Can you tell me anything about the night? Well, I suppose you cannot tell me much about it, as you are all sleeping then. I daresay, however, some of you can tell me something if you try. One little boy says it is quite dark and very quiet. Another one says if we look out of doors we shall see the moon and the stars. Where shall we see them? In the sky. That is quite right. The moon and stars are in the sky. When can we see them? At night. Perhaps some of you remember that we had a long talk about them a little while ago. When does the night begin? When it begins to get dark. What do we call it then? The evening. When does it begin to get dark? When the sun goes down. What do you say the sun does when it goes down? We say the sun sets. Then the evening begins when the sun sets. All of you say, "The evening begins at sunset." When does the night end? When it begins to get light. And when is this? When the sun rises. Then you see we can say: "The night begins at sunset and ends at sunrise." Is the night always the same length? I am afraid that is too hard for you. Perhaps you can tell me if the sun always shines the same time each day? When does it shine the longest? In the summer. And when does it shine the shortest? In the winter. When shall we have the longest days? In the summer. And if we have long days, what kind of nights shall we have? Short ones. Yes; then all of you say: "In the summer we have the longest days and the shortest nights." Now, I daresay you notice that after tea you can no longer go out and play like you did in the summer time. Is it because you have your tea sooner? Oh, no, we do not have our tea sooner. Well, Mary, what are you going to say? Yesterday the teacher had to light the gas before we went home. Well, then, what shall we say? The day is over sooner now. Yes, and that means that the night begins sooner. In the summer it was quite light when you had to get up, but now what are you obliged to do? Mother has to give us a candle. Yes, and that shows you that the day does not begin so soon, and that the nights are longer. So, you see, in the winter the nights are longer. All of you say: "In the winter we have the shortest days and the longest nights."

Now, what do we call that part of the day when the night ends? The morning. What does the sun do then? It rises. Yes, and it keeps on rising until it is high in the sky. What part of the day is it then? We call it *mid-day*. Yes; and sometimes *noon*.

What do you mean by mid-day? The middle of the day. Yes; what do you generally have then? Our dinner. And what do you call the part of the day after dinner? We say it is *afternoon*. Can you tell me one name for morning, noon, and afternoon? That is right. It is the day. What do your mothers and fathers do then? They work all the day-time. What does your mother do? Keeps the house clean, cooks the dinner, etc. And your father? He goes out to work. How does he seem when he comes home? Very tired. Yes; and then you ought to be quiet and go to bed. Do your mothers and fathers go to bed directly it gets dark? Then how do they see? They have candles or lamps or the gas. Why do they not go to bed? Because they have work to do. Yes; and also because they do not want as much sleep as you do. Little children want a great deal of sleep, it helps them to grow strong. Why do we work in the day and not in the night? Because we can see better in the day. And what else? The night is better for sleeping. You said the middle of the day was called mid-day, what do we call the middle of the night? *Midnight*. What time is it then? Twelve o'clock. And which part of the night do we call the *evening?* The first part.

SECTION III.—SCENES OF COMMON LIFE.

A FARM.

If this lesson be given to country children the teacher will have no difficulty in getting them to describe the farm. In giving the lesson to London children, the teacher will have to depend upon the children who have visited the country, and a good picture of the farmyard will be of great service.

Who knows what I mean by a farm? Who has been to a farm? Jane says she went to a farmhouse last summer, so we will ask her to tell us what she saw, and then see if we can find any of the things she tells us about in this nice picture.

What is a farmhouse? It is the house where the people of the farm live. Do you mean all the people that work on the farm? No; the master of the farm and his family. What do we call the master of a farm? The farmer. Where do we say the farmhouses are? They are in the country. Yes; and very often they stand quite by themselves, with no other house near. You might have to walk for many hours before you come to another house. Now, can you tell me what the farm is? Yes, the farmer has a great deal of land, on which he grows a great many things. Can you tell me some of the things the farmer grows? Corn, potatoes, hay, and fruit. Yes; he also grows beans, clover, turnips, and many other things. Then he has a number of sheds called barns, in which he puts all these things. And other places for the animals to live in. Can you tell me some of the animals the farmer keeps? Pigs, cows, sheep, fowls, and horses. These live also in the fields. Do you know what grows in these fields? Grass. Well, all these fields, and yards, and barns are called the farm. You now see how it is the farmer often lives a long way from anyone else. Which part of the year do you like to go to a farm? In the summer-time. Why? Because everything is growing nicely, and we can run about the fields, and go into the yard and see the fowls and ducks. Does the farmer see to all these places and animals himself? Oh no, he has several men and women to help him. When you were at the farm what were these men doing? They were cutting down the long grass. What do they do with this long grass? They toss it about and leave it in the field to dry. What do they call it then? They call it hay. Did you like the haymaking? Yes; it was great fun to roll in the hay. You were playing; but the men could not do that, they had to work. You could leave off when you liked, but they were obliged to keep on until they had put the hay up into large stacks, called hayricks. If you had gone to the farm later in the summer you would have seen the farmer's men cutting the corn. Who has seen a cornfield? See, here is one after the corn has been cut. The corn is now in bundles. These bundles are called sheaves, and are very often tied up by women. The corn is then taken to the farmyard and threshed. Do you know what this does? Yes; it knocks the grains of corn out, and only the long stalks are left. What do we call the long stalks of corn? Straw. The grain is sent to the miller, and what does he do with it? He grinds it into flour. Now you have told me that the farmer makes hay and cuts the corn. What must he do to make the corn come? He must sow the seed in the ground. What does he do to the ground first? He has to dig it up. Yes; when your father wants some flowers in the garden, he digs the ground, and then he sows the seed. Now look at this picture. (The teacher points to a picture of a plough.) Do you see these iron knives, and the long handles, and the horses? Well, this is called a plough, and the farmer digs his fields with this. It would take too long to dig the large fields with spades like we do our gardens. When the ploughing is finished the farmer sows the corn, and the turnip-seeds, and other things he wants to grow. While these things are growing (the farmer calls them his crops), the farmer has other things to do. He has to look after the sheep and other animals, and see that they have nice food. What do they eat in the summer? The grass in the fields. Yes; and the farmer grows turnips, potatoes, and other things for them. What do we get from the sheep? Wool. Yes; in the spring the farmer takes the sheep to the pond, and there the men wash the sheep, and then cut all the thick, long wool off. Do you know why he does this in the spring? I will tell you. The sheep do not want all the wool in the warm weather, and so the farmer cuts it off when the summer is coming, and sells it to men who make cloth and flannel of it. Then the cows are very useful, and the farmer must see to them. What do we get from the cow? Milk. Yes; the women milk the cows every morning and evening. What is done with the milk? Some of it is sold, and the rest is made into butter and cheese. Yes; some day I will tell you how the milk is made into butter and cheese. What other animals must the farmer look after? The pigs. Yes; these he fattens and sends to the butcher. What does the butcher call the pig when it is killed? Pork and bacon. The farmer also sells his sheep and cows to the butcher. What do we call the flesh of sheep? Mutton. And that of the cow? Beef. So, you see, we get our meat from the farmer. Can you think of anything else the farmer has to do? Yes; he must look after the chickens and ducks. Yes; and some farmers keep turkeys and pigeons. What do we get from the fowls and ducks? Eggs. Yes; and the farmer sells all these birds for food. The part of the farm where these birds are kept is called the poultry yard.

You see, then, the farmer besides looking after the fields has many other things to do. He generally has one particular person to look after the poultry-yard. She goes out regularly to feed the poultry, and it is great fun to see how the fowls and the ducks and other birds all run to her when she comes. Do you know what she gives them? Then she takes away the eggs, and sees that the men keep the place clean.

The children should then write on their slates the names of all the animals on the farm, the different things grown on the farm, and the different kinds of work carried on.

SECTION IV.—COMMON EMPLOYMENTS.

THE GLAZIER.

Apparatus:—A small window frame, a diamond, a rule, hammer, knives, brush, glass, and putty.

Now, children, tell me some of the things that a carpenter makes? Doors, cupboards, windows, tables, etc. Which part of the windows does he make? The wooden part. What do we call that? The window-frame. What else has to be done to finish the window? The glass has to be put in the frame. Does the carpenter do this? What do we call the man who puts in the glass? Yes, that is right, he is called the "glazier." Now let us to-day try and find out what the glazier has to do. You have already told me that he puts the glass in the frames. What must he do before he puts it in? Well, here is a piece of glass and a window-frame. Could the glazier put the glass into the frame? Why not? Because it is too large. What must he do? He must cut the glass. Could you cut it? With what does the glazier cut glass? No, not with a knife. See, here is a knife, and you see it will not cut the glass, and yet it is very sharp, for it very easily cuts this piece of wood. He uses a *diamond*. See, here is one. What can you see? A long handle made of wood. What is this at the end? It looks like lead. Yes. it is lead. What can you see in the lead? Something that shines—a piece of glass. It is not glass, but a diamond. Have you ever heard of diamonds? Who has seen one? Where? In a locket. Yes, they are put in lockets and rings because they are very bright and pretty. When next you see them, you must notice how they sparkle. Well, this is only a very small one, and not so bright as those in the rings and lockets. Now look, and I will try to cut this glass. Have you seen anything like this? Yes, it is a rule. Well, you place the rule on the glass, and then placing the diamond close to it, you press the diamond on the glass and draw it along. What have I done? Drawn a line on the glass. Try and rub the line off. You cannot. What should we say then? We have scratched a line on the glass. Yes, the diamond has not cut right through the glass. You now take hold of the glass, and it breaks very readily along the crack. When the glass has been cut to the proper size, what next must we do? We must put it in the frame. But see, there is some of the old glass in the frame, so what must we do? Take it all out. How does the glazier do this? He knocks it out. What does he use? A hammer and a knife. Yes, and besides taking out the glass, what else does he do? He takes out all the old putty. Who has seen the glazier using a brush like this? For what? For brushing out any small pieces of glass or putty. Yes, it would not do to use our hands. Can you tell me why? Because the very small pieces of glass might get into our fingers. Now the frame is quite clear, what has to be done? The glass has to be put in. What do you call a piece of glass like this? A pane of glass. Who can put this pane in for me? That is right, but when you take your hand away what will happen? It will fall out. Well, what else do we want? Some putty. Who can find me the putty? What can you tell me about it? It is of a light colour. Anything else? Yes, it is soft. Can any of you show me how the glazier puts the putty on? Yes, he puts it all round the window-frame, and then puts the glass in. What else does he do? He smooths the putty. How does he do this? With his knife. Is this the knife he used before? No, it is a very smooth one, and not the same shape. The teacher should show the two knives and let the children notice the difference in them. The smooth one is called the glazing or stopping knife, and the other the chopping or hacking knife. Now when the putty is put in and smoothed nicely over, the work is not quite finished. You see the putty is of a light colour, and the window frame is black. What do you think the glazier would do? Yes, he would paint the light putty to make it like the window-frame. You said the putty was soft, and yet the man had to chop out the old putty. Was that soft? Well, then, what would you say? The putty dries and gets very hard. Yes, and we have to be careful not to rub the window very hard at first. Can you tell me why? Now tell me all the things the glazier has to do, and write on your slates the names of all the things the glazier uses in his work.

SECTION II.—PHENOMENA OF NATURE.

THE SPRING.

Now, children, I want you to think about the different kinds of weather we have. What kind of weather is it to-day? It is wet weather. And do you remember what it was like yesterday? It was very bright and sunny. Was it hot?

Not all day; it was very pleasant when the sun was shining. Yes; but there is one part of the year when it is very hot. Do you know what we call that time? The summer-time. Then there is another part of the year when it is very cold. What do we call that? The winter. That is right; the hot time we call summer, and the cold time, winter. Besides these, we have two other parts of the year called spring and autumn. How many parts of the year have I told you? Four parts. Well, there is one name for these. We call the four parts, "the seasons." Tell me the names of the seasons? Which is the hottest season? Which is the coldest? Spring comes between the winter and summer; that is, it comes after the coldest time and before the hottest time, Autumn comes after the summer or hottest time. Can you tell me what comes after the autumn? Yes; the winter, or coldest time. So you see the four seasons together make up the year. How many months are there in the year? Twelve months. Yes, and each of the seasons is of the same length. Who can tell me how many months in each season?

Well, we will now talk about the spring. When does the spring come? After the winter. What kind of weather do we get then? The weather begins to get warmer. Yes; the very cold weather is gone and the sun begins to stay with us longer each day, and looks brighter and makes us feel warmer. Do you not remember in the winter you were obliged to have a candle before you could get up? When you came out of school in the afternoon it was dark, and very often the teachers had to light the gas before school was over. Now the mornings are not so dark, and you are able to get up without a candle.

Did you have the gas in school yesterday? No, we do not have the gas now. Why not? Because we are able to see without. If we go out into the fields and gardens in the winter, what do you notice about the trees? They look dead —there are no leaves on them. Well, in the spring you see them all beginning to grow. The buds on the trees are bursting into green leaves, and as the spring goes on the leaves can be seen all over the trees. And pretty flowers or blossoms cover the trees, and make them look very pretty. Can you tell me some of the trees that have pretty blossoms on them? Yes, the apple, the pear, the plum. Yes, these are our fruit trees. Then the horse chestnut is very pretty with blossoms. Then, if we look at the garden, we shall find the flowers feeling the weather is getting warmer, as they begin to grow and burst out into bloom.

Can you tell me some of the pretty spring flowers? The crocus, the violet, the primrose, the daffodil, the tulip, the wall-flower. That will do. Besides these pretty flowers, you will be able to see everything in the garden is beginning to grow. The gardeners are very busy, sowing seeds and planting for the summer flowers.

Then, if you watch the birds you will find them very busy indeed. Have you seen them flying about with bits of straw and wool in their mouths? They get these things to build their nests. Why do they build nests? Yes, this is the time of the year the birds lay their eggs. I daresay you will wonder where so many of the birds come from. They have been to a warmer country during our cold winter, and when the spring comes back, they come to us again. Can you tell me the names of some of these birds?

SECTION III.—SCENES OF COMMON LIFE.

WRITING A LETTER.

I. **Introduction.**—Now, children, when do you have holidays? In the summer and at Christmas. What do you do in your holidays? The teacher, of course, to this question would obtain many different answers. Well, Mary, what do you want to say? I went into the country. Did anyone go with you? Yes, my father, mother, and sister. James says he also went into the country to see his aunt, and nobody went with him. Were you happy while you were there?

Did you ever think of your father and mother? Did you want to speak to your mother? Yes, I wanted to tell her how happy and how well I was, and what fun I was having every day. Why did you not tell her? Because I was such a long way from her. Well, how could you let your mother know all you were doing? By writing a letter to her.

Now I want you all to help me this morning to write a letter, and we will suppose we are in the country and sending word home to our mother. On what shall we write the letter? On paper. Who can tell me what we call the paper we use for letters? Yes, it is called note-paper. Come and show me some note-paper. What do we call each piece of paper? A sheet of paper. What colour is it? It is white. Have you seen any note-paper that was not white? Yes, I saw some blue note-paper. Harry says he saw some yellow paper; and another little boy says his mother had some pink paper, and Jane says she has some green note-paper. Now look at this pink, yellow, green, and blue note-paper, and tell me what kind of colours they are? They are all very light colours. What else can you tell me about this paper? It feels very smooth, and you are able to fold it.

II. **Contents.**—Now how shall we begin our letter? Well, see, here is a letter I had this morning. What can you see has been written first? Something in the corner. In which corner? In the right top corner. I will read it to you. This is what is written here: "27, Silver Street, Southend, July 14th, 1884." What do you think that tells you? Yes, it is the place where the little boy is staying. Do you know what we call this? Yes, the address. Why do we want to write the address? Yes, that is right; it is to let the person to whom we are writing know where we are. Why? So that he can write back an answer to us. What do we call "July 14th, 1884?" The date or time. Of what does the date consist? The month, the day of the month, and the year. Why must we put the date on a letter? So that the person to whom we are writing may know exactly when we wrote the letter. If we did not put the date on the letter, and said, "I shall be home to-morrow," your mother would not know which day you meant. Why would she not know? Because she would not know on which day you wrote the letter. Can any of you tell me what is the date of to-day? What month is it? What year?

Now let us see what comes next in the letter; will you read it, Mary? "My dear mother." That is right. If you were to write to your father, what would you put? What to your sister? Now we will write a letter on the blackboard. What do we put first? The address. Where shall I begin? Near the right top corner. Tell me the address of the school. What must I write next? The date. What is the date to-day? Where do I write the date? Under the address. What have I to write next? The name of the person to whom you are writing. Where do I write it? Do I write it under the date. Well, look at this letter and tell me where the name is. On the left side of the paper. Do I put it at the top on the left side? Oh, no; lower down than the date. The blackboard would then have on it:

Hope School,
Pleasant Road,
London, N.,
20th October, 1884.

My dear Mother,—

What do you put after that? You then begin to write down all the news you have to send. The teacher should then get the children to compose a letter, and as they proceed she should write it on the blackboard.

Now, I want you to look again at this letter. What do you call this part of the letter? The end. What do you see at the end? A name. Whose name do you think it is? The name of the person who wrote the letter. And what can you see just above the name? Three words. We will ask Harry to read them to us. "Your loving son." Yes; we always write something like this before we write our name. If a little girl wrote a letter to her mother, what would she put? "Your loving daughter." And if she were writing to her brother or sister, what would she write? "Your loving sister." And what would a little boy put? Sometimes we write, "Your affectionate son," instead of "loving son."

Now, we must finish the letter on the board. What shall we put? Why is it necessary to put our name in the letter? We should not know who had sent us the letter. The teacher should explain about letters going to the wrong house, and also going to houses when the people have removed, and how the postman takes these letters back to the post-office. Here they are opened, and then the name and address inside enable the postman to return them to the writers of the letters.

III.—What is done with the letter after it is written? It has to be folded. Into what size? A size that will fit the envelope. Of what use is the envelope? It holds the letter safely. It keeps it clean. And what else? When the letter is in the envelope can you see the writing? Well, then, the envelope prevents the postman or anybody else from reading the letter. What do you do when the letter is in the envelope? Fasten it. How can you do this? There is some gum on the envelope, and when you wet the gum and press the envelope it keeps shut. Now, what else must you do? Write on the envelope. What do you write? The name of the person to whom you have been writing and the address. Why do you do this? In order that the postman may know where to take the letter. What do you do after you have written the address? Put it in the post. But you must put something else on the envelope. What is it? A postage stamp. Where do you get that? At the post-office. What is the use of the stamp? It shows that the letter is paid for. How much did you pay for the stamp? A penny. Well, if you had not put a stamp on, the person to whom you wrote would have had to pay twice as much. How much would that have been? When the stamp is on, how much does he have to pay? Nothing. Where shall we post the letter? In the pillar-box. Does it stop there? Who takes it out? The postman. What does he do with it? He takes it to the post-office with all the others. Yes, and then they are sorted and given to the postmen to take to the different houses.

SECTION IV.—COMMON EMPLOYMENTS.

THE PAINTER.

Apparatus—Various coloured powders, linseed oil, turpentine, white lead, putty, sand-paper, pumice stone, and a few brushes.

I daresay you can tell me some things that the carpenter makes. Now, when he has made the doors, windows, cupboards, etc., are they quite finished? Well, perhaps you can tell me what has to be done to the windows? The glass has to be put in. Who does this? The glazier. Something else has to be done to all these things. What colour is the wood when the carpenter has finished? Are they the same colour when we live in the house? What changes the colour of the wood? The paint. Who paints the wood? A man called a painter. Now, I should like to have a long talk with you about the painter. Do you know what he has to do first? Will you tell me some of the things he uses? Paint and brushes. What is this I have here? Some paint. What can you tell me about it? It is green. Is paint always green? No, it is of different colours. Tell me some of them. Can you tell me now what the painter has to do first? Yes, he must get his paint ready. We say he has to mix his paint, because the paint is made of a number of different things mixed together. Here are some of the things the painter uses to make his paint. What is this? It is oil. Yes, it is *linseed oil*. This is called *white lead*. Then this is very much used, and if you smell it I expect you will be able to tell me its name. It is *turpentine*. Then the painter has to put in something to make the colour. Will the same thing do for all the colours? No, if he wants yellow paint he must have some *yellow powder*. If he wants red he must use *red powder*. Here are some different powders, and I want you to tell me their colours. What colour is this? And this? And this one? etc. Then, besides these, the painter uses other things, but these you must learn another day. Where does the painter put the paint when he is going to use it? In the paint-pot.

Now, look at these paint brushes. What can you tell me about them? They are all long. Which part is long? The handle. Of what is it made? It is made of wood. Why does the painter want a long handle? To hold the brush, and keep the paint from getting on his fingers. Why does he not like it on his hands? Have you had any paint on your hands? How did you get it off? Could you wash it off? No, mother had to rub some grease on my hands, and then it came off. Yes, but besides that, the paint sometimes makes our hands very sore. So you see you must be careful not to touch the paint. How is it when I touch this door the paint does not come off on to my hands? Because the paint is dry. Is it dry when the painter puts it on the door? When is it that you must not touch paint? When it is wet. Now, look at the brushes again, and show me another part beside the handle. Of what is this part made? Of hair. We say it is made of bristles. Feel how soft they are? The painter does not like a hard brush. Are all the brushes the same size? No, some are large, and some are small. Do you know why the painter wants brushes of different sizes? Well, perhaps, you will be able to tell me some other time, when you have watched the painter at work.

When the painter has his paint and brushes ready he has to look at the wood he has to paint. The wood must be very smooth. If there are any nails in it, he gets a punch and knocks the heads of the nails into the wood. This leaves a number of small holes, and these the painter fills up. What does he use to fill up the holes? Some putty. All the rough places he rubs with sandpaper or pumice stone. What does this do to the wood? Who can show me the pumice stone? Which is the sandpaper?

Now the wood is quite ready for the paint. Who has seen a painter at work? How does he move the brush? Yes, he moves it up and down. Why does he not move it about any way? The painter wants the paint to be very smooth and not to show the marks of the brush, and he does not press very hard. If you watched him carefully, you will see that after he has painted the wood once he lets the paint get quite dry and then he paints it all over again. We call this putting on another coat. How many coats would that make? Two. Sometimes they put on three or four coats. Of what use is paint? Yes, it makes the wood look better, and the house looks more finished. There is, however, another reason why we paint the wood. It keeps the wood from rotting or wearing away. When the wood is outside the house, the rain would soon rot it if it were not painted. We say the paint preserves the wood. Then again: sometimes when boys and girls are playing their hands are dirty, they put them on the paint and make dirty marks. What does your mother do then? She washes the dirty marks off the paint. Can she wash the paper on the walls? No; it would spoil the paper. The *summary* written on the blackboard would be as follows:—

The painter uses paint and brushes.

The paint is made of white lead, linseed oil, turpentine, coloured powder, etc.

The painter's brushes are made of long handles and soft bristles.

The painter puts on several coats of paint, and each one must be dry before the next goes on.

PAPER-MAKING.

I. **Qualities.**—What have I in my hand? Look at it and see what you can tell me about it. Is it white? Yes; is this piece white? Is this piece blue? What colour is this? What will you say about the colour of paper? Paper is of different colours. How does it feel? It feels very smooth; it is thin and light. What am I doing to it now? Folding the paper. Then you see we can fold paper. What do we say of those things that we can fold? We say they are pliable. What am I doing to the paper now? Tearing it. How would you say it tears? Very easily. What else can you tell me about paper? Why does your mother use paper when she lights the fire? Because it burns quickly. Then, you see, paper burns easily and with a flame. What do we say of those things that burn with a flame? They are inflammable. Now we will write on the blackboard what we have learnt about paper.

II. **Of what made.**—Now look at these pieces of paper. Can you think of what they are made? See, I have here some mixed rags. Can you believe that paper is made from rags like these? Well, most of these pieces of paper were made from rags, and nearly all the paper we use is made from them. Then, besides the rags, there are some other things used for making paper; here are some of them. The teacher should then show the children some rope, grass, straw, and waste paper. Sometimes you can see small pieces of straw in brown paper. Do you not think it is very wonderful to be able to turn these things into nice paper like this?

III. **How made.**—Well, I daresay you would like to know how the men make these things into paper. I will tell you a little about it now, and when you are older you must read more about it. Do you know what we call the people who make paper? Yes, they are called papermakers. How does the papermaker get the rags to make into paper? Well, what does your mother do with her rags? She sells them. To whom does she sell them? To the man at the rag-shop. Yes, and if you go to the rag-shop you can see large sacks full of rags. These are sold by the man to the papermaker. So you see the papermaker can get plenty of rags. What kind of rags does he get? All kinds. Yes, he gets old and new, dirty and clean, and all sizes and colours. Then what do you think the man does with them? That is quite right, Harry; he must sort them. He separates the clean from the dirty. They are then put into a machine that turns round and round and shakes the rags about. The bottom of the machine has many small holes, and through these a great deal of the dirt and dust falls out. There are some sharp knives in the machine, and these cut the rags into small pieces. The rags are then boiled, and something is put in with them that makes all the rags quite white and clean. When they are quite white and clean, they are put into another machine which has a great many knives in it. These knives turn round and round. What do you think becomes of the rags in this machine? They will be cut into very small pieces. Yes, the rags are cut into the smallest pieces possible. After this, something is done so as to turn these pieces into what is called *pulp* (some of this should be shown). What is this pulp like? Thick milk or cream. What is it really made of? Of the rags beaten up very small. The pulp is then pressed through a machine which squeezes all the water out of it, and rolls and presses it on thin wire gauze (some of this should be shown), and when dry it is paper.

IV. **Summary.**—This should be written on the blackboard as the lesson proceeds.

Paper is smooth, thin, light, of different colours, pli-a-ble, very easily torn, and in-flam-ma-ble.

Paper is made of rags and other things, as rope, grass, straw, and waste paper.

When it is made of rags, the rags are: 1, sorted; 2, put in a machine that shakes the dust and dirt out; 3, boiled to make them white and clean; 4, another machine cuts them into tiny pieces; 5, then beaten into pulp; 6, made into paper.

SECTION II.—PHENOMENA OF NATURE.

THE SUMMER.

Can you tell me what part of the year we spoke about last week? Yes, the spring. How many months are there in the spring? What are their names? Can you tell me what comes after the spring? The summer. And how long is the summer? Can you tell me the names of the months? What kind of weather do we have? Yes, it is very hot, and we see the sun for a long time. What kind of days would you say we had? The days are very long, and the nights very short. Yes, when you wake up in the morning you see the sun shining, and when you go to sleep at night it is still light.

Are you glad when the summer comes? Yes, we can keep out of doors then. You are able to have all your games in the open air; and the bright weather makes you feel very happy. Your fathers and mothers are also very pleased to see the summer come. They are able to get out into the fresh air after they have finished their work. Can you tell me some of the things we do in the summer-time? Little children go for nice walks in the parks and fields; they run and jump about, and when they are tired they can sit down on the grass without catching cold. Could you do this in the winter-time? No, we have to go indoors when we want to sit down. What do the big boys do? They play at marbles and tops, and also at cricket. If they are near the water they like to bathe in it, for it is not very cold. Men also like to row boats on the water, and sometimes boys sail their little ships. Then you can go fishing without catching cold. Yes, and there are many other things we do in the summer-time.

Although you can play so much in the open air you must be careful not to get too hot, nor to stand about in the sun without having your hat on, for you are sure to be very ill if you have your head uncovered.

There are other reasons why we like the summer to come. In the summer-time all the things in the gardens and fields grow very fast, and the fruit gets ripe. Can you tell me some of the fruits that grow in the fields and gardens? The apples, pears, plums, cherries. Yes, these all grow on trees. Tell me the names of some that grow on bushes? Currants, gooseberries, raspberries, and strawberries. Well, the raspberries grow on what are called canes, and the strawberries grow on little plants close to the ground. Then we see the corn growing very high, and towards the end of the summer it gets quite ripe. We like to see the golden ears of corn with the sun shining upon them. Can you tell me the name of the corn of which flour is made? It is called wheat. What do we make of flour? It is made into bread. When we see the fields full of good wheat we know we shall have good bread. When the corn is ripe it is cut down, and we say the harvest-time has come. Haymaking should also be referred to.

Then the gardeners are very busy in the gardens. Why? Because the gardens are full of flowers, and they all want looking after. Can you tell me the names of some of the summer flowers? Roses, geraniums, fuchsias, marigolds, nasturtiums, sunflowers, sweet-peas, mignonette, etc. The warm weather makes these and all other things grow very quickly. Some things, however, which we do not like in the garden give the gardeners a great deal of work. Can you tell what they are? Yes, they are the weeds. Why do we not like them? Because they spoil the garden and prevent the flowers from growing nicely. The other day some little girls told me they had a nice lawn in their garden. What do we call a lawn? A nice plot of grass. Well, what does the gardener have to do to this? He has to cut it very often. Why? Because it grows so quickly in the warm weather.

In the summer-time you have nice long holidays. Where do some of you go then? To the seaside and into the country. The pleasures of the seaside and country should then be slightly alluded to.

SECTION III.—SCENES OF COMMON LIFE.

THE PARTS OF A HOUSE.

To-day, children, we are going to talk about the different parts of a house, and I want you to tell me the uses of them.

First, tell me all the different parts you can think of. The walls, the windows, the doors, the roof, the rooms. That will do. Now, of what are the walls made? They are made of bricks, and sometimes of stone. Of what else are they sometimes made? How many of you have seen wooden houses? Well, then, the walls are sometimes made of wood. A little boy says they are made of tin. I think he means of iron. I daresay you have all seen the church not very far from here; that is made of iron. That is only put there until the people have enough money to build one of bricks or stone. Why do we build the walls of bricks or stone? To keep out the wet and the cold. Of what other use are the walls? They have to hold the floors, the windows, and the doors. Where is the roof of the house? At the top. Of what is it made? Of slates or tiles, Yes, and in the country it is made of straw, etc. We say these kind of roofs are "thatched." Are the roofs generally quite flat? Oh, no; they are slanting. Can you tell me why they are slanting? For the rain to run off. Where does the rain run to? The rain-water runs into the gutters. Where are the gutters? All round the edge of the roof. Yes, and I daresay you have all seen a long pipe running down the wall of the house from the top to the bottom; this pipe carries the water from the gutters into the drains. In the country the people have very large tubs, and the water from the pipe runs into them. This water is very soft and nice for washing. Why do not the people in London do the same? The teacher should briefly explain this to the children.

What do you see on or above the roof? The chimneys. For what are they used? They carry off the smoke from the fires. Where are the fires? Inside the rooms. For what do we use them? To cook our food and to warm ourselves.

When you want to get into the house, what must you do? Wait until the door is opened. When you have entered the house, in what part are you? In the passage. Yes, sometimes we call it the hall. What can you see when you are standing in the hall? A number of doors. Where would they lead you? Into the rooms. What else do you see from the hall? The stairs. Where do the stairs lead? To the rooms on the next floor. What do we call the part at the top of the stairs? The landing. If you stand on the landing, what do you see? Several doors. What do these open into? Into different rooms. What do you call the stairs leading from the hall to the landing? A flight of stairs. Is there more than one flight of stairs? Yes, there are generally two flights and sometimes more. Well, Mary says there is a flight of stairs in her house leading from the hall down to the kitchen. When you have to go downstairs from the hall to the kitchen, we say the kitchen is in the basement. What do we call the rooms on the first landing? The first floor. And on the second landing? The second floor. So, you see, in some houses we have a ground floor, a first floor, a second floor, etc.; and then in others we have a floor below the ground floor, which we call the basement.

Why do we have doors to our houses and rooms? To keep out the cold and the wet. And for what else? To prevent anybody from walking in when they choose. What do we do when we go out? We lock our doors. Why? So that our house will be quite safe. If we were to leave our doors open perhaps some persons, whom we should not like, might come in. Tell me what you call those persons? What do you mean by robbers and thieves? Yes, bad people who get into our houses and take our things away.

Then you told me there were windows in the house. Of what are they made? Of wood and glass. Of what use are they? They let in the light, and at the same time keep out the cold and wet. Why are they made to open and shut? When it is warm weather, or when the room is too hot, we are able to open the windows and let in the cool air, and when the room is cool enough we can shut them again.

Tell me the names of the different rooms in your house, Harry? The kitchen, the sitting-room, and the bed-room. Who can tell me the names of any other rooms? The scullery. Well, Willie? My uncle has a dining-room. Yes, and some people call another room, the parlour or drawing-room. The children might then be asked the use of each room.

Then we must not forget that your mothers like to find nice large cupboards in the different rooms. Why?

Summary.—The children might write on their slates the names of the different parts of the house, and for a further exercise they might say of what they are made, and for what they are used.

SECTION IV.—COMMON EMPLOYMENTS.

THE PORTER.

Now, children, I want you to think of a railway station, and tell me what you can see there. Yes, that is right. Now, what men do you see about the station? The porters, the guards, the station-master. Where do you generally see the guard? In the train. How do you know a porter? By the dress he wears. What kind of clothes does he wear? They are of a dark colour; they look thick and strong. On his coat he has rather large buttons, and on his cap there are some letters. Tell me some of the letters you have seen? Harry says he has seen M.R. and D.R. Jack says he once saw G.N.R., and Mary said she saw S.W.R. Well, these letters show which railway the porters belong to. M.R. stands for Metropolitan Railway, D.R. stands for District Railway, and G.N.R. stands for Great Northern Railway. I wonder who can tell me for what S.W.R. stands. That is right, it means South Western Railway. What kind of coat does the porter wear? It is a short one, and it is called a jacket. Do the guards and ticket-collectors wear the same kind of clothes? No; they are made of smooth cloth, and they have long coats instead of jackets. One little boy says the porters wear striped jackets; well, they sometimes do in the warm weather, because their other clothes are so thick and warm.

I want you now to tell me some of the things you have seen the porters doing. They sweep the platforms, pick up the pieces of paper, clean the lamps, and when the weather is hot they sprinkle the platform with water. Why do they do this? To keep the stations cool. But the porters do something else. What do they do when the train comes in? They call out the name of the station very loudly. Why? So that the people in the train may know where they are. The porters also call out where the train is going. And what else? They open and shut the carriage doors and help the people in and out. Then they have to look after the luggage and see that it is right. How can they tell? They read the papers on it. Yes, we call these papers the labels. If your luggage is too heavy for you, the porters will carry it for you.

You see, then, that the porter has a great many things to do and see to. What kind of man ought he to be? He ought to be quick and strong. Why? Because he has to carry heavy luggage, and the train cannot wait long for him. Then he should be kind and civil. Why? Because he has to help people and tell them where to go. Then he must be clean, and able to read. Why? Because he has to look at the labels, and he has to label the luggage when you are starting.

SECTION II.—PHENOMENA OF NATURE.

THE AUTUMN.

We have already spoken about two parts of the year. Can you tell me what they are? The spring and the summer. How many parts have we still to talk about? Two. What are they? The autumn and the winter. We have one name for all these parts; do you know what it is? Yes; we call them the seasons. How many seasons are there? Four. What are their names? Spring, summer, autumn, and winter.

Now, you can tell me some of the work that is done in the spring—what kind of weather we have—the flowers that grow, etc. Then you can also tell me about the summer—the nice warm weather and long days—the bright sunshine—the lovely flowers, and the fruit, etc. Then the next season is called autumn, and I want you to try to tell me what goes on then, the flowers that grow, and the kind of weather we have.

Do you remember the hot weather we had in the summer, and the very long days, and how you liked playing in the garden, and did not go to bed till it was very late? Well, when the autumn comes the days begin to get much shorter, and I daresay you will notice that it is too dark to play out of doors in the evening, and so you go to bed earlier. Do you mind that? No, because we cannot see to play, and we can go to sleep when it is dark. What do you notice about your clothes? Our mothers are careful to wrap us up well when we go out. Why? Because the weather is much colder, and we might catch cold if we were not well wrapped up.

How did you say the gardens looked in the summer? Very bright and pretty. Why? Because they were full of lovely flowers. What else did you notice in the gardens? The birds singing, the bees flying about from flower to flower, and butterflies, and many other things. Then the air is filled with the scent of the pretty flowers. Yes, that is quite right. In the autumn, however, you will not find the butterfly and bee. Do you know why? Because the weather is cold. Then most of the bright flowers have died, especially after the first part of the autumn has gone. We still have a few flowers left. Can you tell me the names of any? Asters, dahlias, and chrysanthemums. Yes; the chrysanthemums are the real autumn flowers, and remain a long time in the garden. And now, I want you to tell me about the fruit. You remember that in early summer we had strawberries, gooseberries, raspberries, etc., and later we had cherries, and some apples and pears. Can you tell me what we have in the autumn? Apples, pears, and oranges. Where have you seen oranges growing? That is right; we cannot see them in our gardens, for they grow in a warmer country. They are sent to us from countries that are very much hotter than ours, and they come a long way. Do you know how they are brought to this country? They are packed in large boxes, and brought across the sea in ships.

Now, I want some of you to tell me the work that is done at this time of the year. The harvest is finished. Do you know the names of some of the things that are gathered at this time? Yes, apples and pears. And what else? Corn and hops. You will see the men very busy ploughing the ground, and sowing seeds for next year's crops.

Then if we stay with the farmer, we shall find him very busy threshing the corn. Can you tell me what that means? Why do they thresh corn?

The summary should consist of the names of different flowers and fruits that grow in the autumn, and of the different work done by the farmer and gardener at this time of the year.

SECTION III.—SCENES OF COMMON LIFE.

MEANS OF WARMING AND LIGHTING.

(A) **Means of Warming.**—Now, children, will you tell me what kind of weather we have in the summer? And in the winter? How do you often feel in the winter? Do you like feeling cold? What do you do to warm yourselves? Run about and play at games that make us move quickly. Do you run about the house to keep warm? What do we have in our houses to keep us warm? Fires. Do we have fires in the summer-time? Yes, in the kitchen. Why? To cook our food. But do we have a fire in the sitting-room? Why not? Because it is quite warm enough without a fire. How is that? The sun is so hot and shines so brightly, that it makes all the rooms warm. Then we have found out that the sun keeps us warm in the summer, but in the winter we are obliged to have fires to make us warm.

When you are in the schoolroom in the winter, do you feel cold? How is that? Are there any fires in your school? Well, I wonder how the room is warmed. Well, Mary, what do you say? There are a great many hot pipes in the room. Whereabouts are these pipes? All round the room, under the floor, and down the walls. How do you know they are hot? I have put my hands on them. Yes. I often see little boys and girls putting their hands on the pipes, and sometimes I see the boys putting their feet on them. Why do they do this? To make their hands and feet warm. Do you know what makes the pipes hot? Well, listen, and I will tell you. There is a very large fire making the water very hot, and this hot water runs through the pipes and makes them hot. By the time the water has been through the pipes it is cold and fresh hot water goes into them, and in this way the pipes are kept warm. The caretaker has only one large fire to see to, and he has not the trouble of clearing away a great deal of ashes from the fire-grates like your mother has to do at home. Harry says that he knows a school where they have very large fire-grates. Well, this is not as nice as the pipes. Can you tell me why? In our large room it does not matter where you sit, you will find it warm, but in the large rooms warmed by the fire-grates, the children who sit near are very warm, and the children who sit at the other end of the room will be very cold, although there is a large fire in it.

If any of the children should have seen the steam warming apparatus, the teacher might explain that steam is passed into the pipes from a large boiler instead of water. A simple experiment might be made before the children by means of a spirit lamp, kettle, and piece of metal tubing.

Now, you can tell me two ways of warming our rooms. What are they? Fire-grates or open fires, and hot-water pipes.

How many of you have been to church? Do you feel cold there? What makes the church warm? Yes, there is a fire there; but is it an open fire like ours at home? No, it is a large stove. These stoves are very useful for warming large rooms. They throw out a great deal of heat. Very often in churches you see the gas burning, even in the morning. Do you know why the gas is alight? To give us light. Do we want the gaslight when the daylight is good? The gas is lighted to help to warm the church. Well, John, what do you want to say? The school I used to go to had large stoves in the rooms. Oh, yes; stoves are also used to warm many other places besides churches and school-rooms.

Sometimes people have gas stoves to warm their rooms; that is, they burn gas always instead of fires. Some of these stoves look very pretty, and when alight, look like the open fire. They are very clean. What does your mother have to do after there has been a fire? She has to clear away the ashes, and clean the grate. With a gas stove she would only have to turn out the gas; there would be no dust or dirt. Then, when she wants a fire, she would not have to carry coals about, or paper and wood; she would only have to light the gas. You see, then, that this is another way to warm the rooms.

Sometimes rooms are warmed in the following way by means of hot air. A large furnace, with a shaft leading up to the room is built in the cellar, or at the bottom of the building. What do you mean by a furnace? What is a shaft? The teacher should sketch this on the blackboard, and then point out that a grating is put into the shaft leading into the room, and that this grating can be opened or closed whenever the teacher wishes, and explain why. A very large fire is made in the furuace, and the air passing over it is made very hot, and then goes up the shaft. Where does the shaft lead to? What comes through the grating? How does this warm the room? You will notice on the other side of the room another grating, and if you put your hand there you will not find hot air. This grating lets the air out after it has passed through the room. You see, then, that this is something like the hot-water pipes. The hot water runs through the pipes, and when cold, passes out. The hot air passes through the room, and leaves it at the other end. If you put your hand, or even stand near the grating in the shaft, you will feel the hot air rushing into the room. This way of warming the room keeps every part of the room warm.

Now, I want you to think about what we have been talking, and tell me the different ways of warming the rooms, etc.

We warm rooms by means of open fires or grates.
We warm rooms by means of closed fires or stoves.
We warm rooms by passing hot water through pipes.
We warm rooms by passing steam through pipes.
We warm rooms by means of gas in gas stoves.
We warm rooms by means of hot air.

(B) **Means of Lighting.**—Now I want you to think about something else. When it gets dark, what must we do if we want to see? We must get a light. What kind of light do we get? Well, one little girl says her mother lights the gas, and another says her mother lights the lamp, and here is a little boy who says his mother lights a candle. So, you see, there are several ways of getting light. Tell me them again. The gas, the lamp, and the candle. We will have a talk about each of them.

How does your mother light the gas? Yes, she turns on a little tap, and then lights it. With what does she light the gas? With matches or a piece of lighted paper. Does your mother have to put anything in the tap? Can you see the gas before it is lighted. How, then, do you know when it is turned on? That is right; you can smell it. Can you smell it when it is alight? No, there is no smell when it is alight. But there is another way you can tell when the gas is turned on. Can you tell me? Yes, you can hear it. Do you know that you should never touch the gas pipes? Why? Well, I will tell you. If the gas is turned on without being lighted, the gas keeps on coming out of the pipe, and the room gets quite full of gas. Then if anyone goes into the room with a light the gas would catch fire, and there would be an explosion. Have you ever heard of an explosion? What does it do? The teacher might here relate a short account of a gas explosion, showing the damage done, etc. What kind of light do we say the gas gives? A nice bright light. What must you remember about the gas? That it is very dangerous, and we must not touch the pipes. If ever you smell gas, what should you do directly? Tell mother, so that she can see to it. Yes, sometimes there is a very small hole in the pipe, and the gas comes out or escapes. Your father must then stop up the hole, or call the gasfitter to it.

Now I should like you to tell me something about the lamp. How many of you have lamps at home? What does your mother put into the lamp? Oil. What oil does she use? What else is in the lamp? The wick. Of what is the wick made? Which part of the lamp does your mother light? The wick. Now you must also be very careful with the lamps, for if you knock them over they are very dangerous; the oil quickly catches light, and it is very difficult to put out, and even if the oil did not burn it would spoil whatever things it fell upon. Which do you think your mother likes, the gas or the lamp? Why? Because the gas is easily lighted, and is no trouble. And the lamp? The lamp has to be cleaned and filled with oil every day. There is another kind of lamp, in which we do not burn oil; do you know what we put in them? Yes, spirit. Do you know the name of the spirit? Ah, Harry knows, because he says he fetches it for his mother. Look, I will write it on the board; you see it is a very long word for you: meth-y-lat-ed spir-it. For what does your mother use these lamps? For carrying about the house, etc.

We have still one light to talk about. What is it? The candle. Of what is the candle made? Of tallow, and a wick in the middle. What use is the wick? Of what use is the tallow? In what do we stand the candle? Why? Do we get as much light from the candle as we do from the gas or lamp? Why does not your mother like you to carry the candle? Because we drop the grease about the house.

Then there is another light you have not told me about, and perhaps many of you have not seen it. If you go to some of the railway stations you can see it. It is also to be seen in large shops, and also in some of the streets. I mean the electric light. Hands up, those of you who have seen this light. What kind of light is it? It is very, very bright, and looks very nice. You shall learn more about this another day.

SECTION IV.—COMMON EMPLOYMENTS.

THE ERRAND-BOY.

We are going this morning to talk about the errand-boy, and I want you to tell me all you can about him. What work do errand-boys have to do? They have to take messages, parcels, and letters for their masters. What do they do when they are not thus running about? Who has seen an errand-boy busy in the shops? Well, tell me some of the things he was doing. Yes, he has to sweep and dust the shop, clean the windows, etc., light the fires, and some of them have to clean knives and boots, etc. Then the big ones take the shutters down and open the shop. So, you see, they have to get up early in the morning, and they generally have to put the shutters up at night. The duties of errand-boys should be carefully recapitulated before proceeding with the lesson.

Now, children, how many of you would like to be errand-boys when you are big enough? Very well, then, we will see what kind of boys you must be, in order to make good and useful errand-boys. Let us see what is the first thing the errand-boy has to do. He has to take messages and parcels. When his master is giving him a message, what should he be doing? Listening. Yes, and very attentively. It would not do for him to be looking at, or thinking about anything else. Why? Because if he did not hear the message properly, he would probably make mistakes when he delivered it, and this might cause a great deal of trouble. So we say, "An errand-boy must attend to what is said to him."

Again, perhaps the errand boy might have several messages and parcels to deliver, and his master would then write the addresses on the parcels. Then what must the boy be able to do, so as to leave the right parcel at the right house? He must be able to read. Very often he would receive money for the goods, and then what would he have to do? He would have to write "Paid," and also his name on the bill. You see, then, that errand-boys must be able to read and write. Then while you are at school, if you want to be errand-boys, what must you learn to do? We must learn to read and write Yes, you must work very hard while you are at school, for you will have but little time or chance afterwards.

When the boy has started on his errands, what should he do? He should go quickly to the places he has to call at, and return as soon as possible. Who has ever seen a boy going on an errand? Very well, Mary, what did you see him doing? He was carrying a parcel, and going along very quickly. Was that the right thing to do? Yes. Well, John, what have you to say? I saw a boy who had put his basket down, and was playing at marbles with some other boys. Was that right? Why? Because he was playing when he ought to have been working. Yes, and very likely the people to whom he was going were waiting for the things he had for them. What do you think his master would say if he saw him doing such a thing? He would be very angry, and very likely he would not keep him as his errand-boy, and so the boy would lose his place. The class should then repeat, "An errand-boy should go quickly when sent on an errand."

If a master wants an errand-boy, do you know what he does? Yes, he puts a card in the window with the words "Errand-boy wanted" printed on it. Boys read the card, and if they want work they go into the shop to see if the master will have them. Now, which of the two following boys do you think a master would choose? One has very clean hands and face, his boots well polished, and his clothes, though perhaps not new, nicely brushed. The other has dirty hands and face, his clothes very untidy, and his boots not blacked. The first one. Why? Yes, we do not like to see a dirty, untidy boy about the house. The children should then repeat, "An errand-boy should be clean and tidy."

Suppose a boy had to take a very nice cake to a house, but going along, he thought he should like a cake like that to take home with him, and then, instead of leaving it at the proper place, he takes it home. What do you think the lady would do who expected the cake? She would go to the shopkeeper and tell him that she had not received the cake. What would the shopkeeper then do? He would call the errand-boy and question him about it. Perhaps the errand-boy would say that he had left it at the house. What would this be doing? Telling a story. And what had he done when he took the cake home? He had stolen it. Do you think the boy would keep his place? No, the master would soon find him out. Yes, and then he would lose his situation, and what is worse still, he would find it very difficult to get another one. Do you know why? When a master takes a new errand-boy he generally wants what is called a character, and, therefore, he asks the boy's last employer all about him. The children should then repeat, "An errand-boy should be truthful and honest."

The teacher, proceeding in a similar manner, should show the necessity of errand-boys being respectful, obliging, obedient, and industrious, and also how unpleasant it is to have to deal with boys who do not possess these qualities, and how pleasant it is to work with good, happy, industrious boys.

As a recapitulatory exercise, the children might write the following on their slates, or repeat from blackboard :—

An errand-boy has to take messages, parcels, and letters.

He has also to sweep and dust the shop, clean the windows, etc.

Sometimes he has to clean boots, light the fires, and open and shut the shop.

An errand-boy must be able to read and write.

He must be attentive, active, clean, truthful, and honest.

SECTION II.—PHENOMENA OF NATURE.

WINTER.

Can you tell me how many parts of the year we have talked about? What names did we give to them? Spring, summer, and autumn. And what was the one name for all of them? The seasons. How many seasons are there? Then, you see, there is still one you have to tell me about. Which is it? Yes, it is the winter. When does the winter begin? What kind of weather do we have then? What kind of weather did you say we have in the autumn? At first warm, and then it gradually gets colder. And what can you tell me about the days? They get shorter and shorter. Yes, and by the time the winter comes we have very short days. When we get up in the morning we are obliged to have a light; and in the evening it is dark long before you go to bed, although you go to bed earlier than you did in the summer-time. Well, John, what have you to say? It is dark before we leave school, and teacher always has the gas alight. Yes, that is quite right. Does she light the gas in the summer-time? Do you remember hearing about a day we called the longest day? When do we have the longest day? In the summer. Do you remember on what day? Yes, on the 21st of June. Well, we have one day we call the shortest day, and it comes on the 21st of December. In what season is the shortest day? You told me just now that we had very cold weather in winter. Can you tell me what the cold often does? It freezes the water. What do you mean by this? The water turns into ice. What do men and boys do then? They go on the ice and have a great deal of fun. Yes; we say they skate and slide on the ice. The teacher should show the children a pair of skates, and describe how they are used. Do you like to slide on the ice? You must be very careful not to fall on the ice, and you should not go on it before you are told. Sometimes the ice is not very thick, and then it is not strong enough to bear you. Do you know what happens if the ice is not strong enough? Yes, sometimes it cracks. What is under the ice? Water. Does the ice sink when it cracks? Oh, no; it floats on the water. What happens, then, when it cracks with people on it? The people fall into the water. Yes, and this is very dangerous. Sometimes they get under the unbroken part of the ice, and then they cannot be got out. What happens to them then? They are drowned. Even if they are got out they are often very ill, for the water makes them very cold. So I hope before you go on the ice you will wait and see if it is strong enough. Very often you will see men watching the ice, and they will tell you if it is safe. Can you tell me any other places where the boys make slides? Yes, in the garden and in the streets. Yes, I have often seen the boys having fine fun on these slides. But the slides in the streets are very dangerous, and ought not to be made there. Can you tell me why? Yes; old people walking along slip and fall on them.

What can you tell me about the roads in frosty weather? They are often very slippery. How do the horses get along? Not very well. Often the drivers let them walk, and sometimes you see men leading the horses. When do they do this? When the roads are very, very slippery. What else do men do to help the horses? They throw sand in the road. Yes; but what do they do to the horses? Well, if you were to look at the horses' shoes in warm and cold weather, you would see a difference. See, here is a shoe worn in the summer, and here is one used in the frosty weather. The teacher should lead the children to see the difference, and explain what is done to the shoes. When the weather is so very cold, and we have no water in the houses because the water is frozen in the pipes, what do you have to do? Fetch the water from the street. Yes, you will see the man who turns the water on putting pipes into the holes in the road where the water-plugs are. You have to get all your water from there. This is a great trouble to your mothers, and therefore you must be very careful and not waste the water. What do we call the man who turns on the water? The turncock.

What else do we see in the winter? We often see the ground covered with snow. What do boys do then? They play at snowballs, and also make snow men. Yes; I once saw a number of boys with a ball of snow, which they kept rolling over and over, until it got too heavy for them to move. It was very large then, and they had great fun climbing and jumping on it. All the games you play at in the winter must be those that make you run about. It does not do to stand still. Can you tell me why? Yes, we catch cold and get ill if we do not run about when the weather is cold. Is the weather always as cold as this? No; sometimes we do not have any snow or ice, but a great deal of rain. Yes; then boys and girls have to stay indoors, and they soon get tired of doing so, and wish the summer would come with its bright, sunny days.

Now, there is one part of the winter that we all like very much. Do you know which part I mean? Yes, Christmas time. Why do you like Christmas? Because we have Christmas pudding and all sorts of nice things; then we also have such a deal of fun, and we go out to parties. What do you like to have at these Christmas parties? We like to have nice Christmas trees. What are they? Why do you like them so much? Yes, they look very pretty with the toys on them and the many candles alight. Then it is great fun to play for the toys on the trees. Sometimes each child gets two or three toys. Then your fathers and mothers are also very pleased and happy. When Christmas Day has gone, there comes another day soon after that we all think a great deal about. Do you know which day I mean? Yes, New Year's Day. Why do we say it is New Year's Day? Well, I will tell you. Which is the first month of the year? January. Yes; and this comes soon after Christmas. Then the first day of January is the first day of the New Year. Now, tell me when New Year's Day comes. Why do we call it New Year's Day? What do we say to people on this day? We wish them a happy new year. Why do we do this? Because we want them to be happy all the coming year. Soon after this we begin to find the days get a little longer, and we think of the next season. Can you tell me the name of the one that follows winter? Yes, it is spring. Now tell me how many seasons there are. Which is the hottest and which is the coldest? When is the longest day? When the shortest?

COTTON.

I. **Qualities and Uses.**—Tell me some of the different things we use for clothing. Coats, dresses, etc. What do little girls wear over their dresses? Pinafores. Yes, and they also wear a great many things under their dresses. Tell me the names of some of these things. Can you tell me of what boys' coats and trousers are made? They are made of cloth. And of what is cloth made? It is made of wool. Now, can you tell me of what pinafores are made? And the underclothes? Well, we will have a chat about cotton to-day. Look at this piece of calico or cotton. What can you tell me about it? It is white. Yes, and this piece of cotton? And this piece? So you see the cotton stuff is not always the same colour. It is dyed these different colours. Now feel this piece. What can you say about it? It is soft and smooth. Take this piece of cotton in one hand and this cloth in the other, and see what you can find out. The cotton is lighter than the cloth. Yes, the piece of cotton is much lighter than the cloth. Which do you think keeps us the warmer? The cloth. Then when is the best time to wear clothes made of cloth? And when would you sooner wear cotton dresses? Yes, if you pay attention, you will notice that little girls wear cotton dresses in the summer and little boys wear cotton suits. We often call these suits washing suits; can you tell me why? Because they are thin, and easily washed. I daresay you remember that in the summer you have several of these suits, but in the winter you wear only one suit. Of what is it generally made? Of thick cloth. Yes, and this is not so easily washed.

Can you tell me anything else besides clothes that are made of cotton? What do your mothers put at the windows? Curtains and blinds? Well, the blinds and curtains are often made of cotton. Then some of the bed-clothes are made of cotton. Can you tell me some? Yes, sheets, quilts, pillows, and blankets. Willie says the blankets are made of cotton. See, here is a piece of blanket. Do the little threads look like cotton? Of what do we say the blankets are made? The blankets are made of wool. Yes, they would not be warm enough made of cotton. Another little boy said the pillows. Which part of the pillows did he mean? Yes, he meant the outside, or, as we say, the pillow-cases. Then we also have the reels of cotton which are used for sewing.

II. **From whence obtained.**—Now you have found out how useful cotton is perhaps you would like to know where we get it. Well, Annie says we get it from the cotton-tree. Do you think it grows on the tree like this? Have any of you seen a cotton-tree? Harry says he has seen a picture of one. Yes, you cannot see the cotton-tree growing in this country. It grows in very hot countries, a very long way from here. See, here is a picture of the cotton-plant. Look, and I will try and tell you about it. One kind grows very large and is called a cotton-tree, but the kind you are looking at only grows about two or three feet. This height should be shown to the children. A little boy about the size would be a good example. What colour would you say (looking at the picture) the leaves are? A dark green colour. And the flowers? A light yellow. Yes, we say a pale yellow. But I can see another colour. Yes, some purple in the middle. The teacher should then direct the attention of the children to the seed-pods, and then show specimens of seed-pods covered with the soft, downy threads. The children should also have pointed out to them that the little seeds are mixed with the cotton.

When the pods are ripe a great number of people are employed to pick them off, and then before the cotton is packed all the little seeds are picked out. The soft cotton is then packed into large bundles. These bundles are called bales. The bales are then sent to this country. How do you think they are brought to this country? Where did we say the cotton-plant grew? In hot countries a long way off. Well, then how is the cotton brought here? In ships. Yes, the ships came across the sea with it.

Now when we get this cotton is it ready for use? See, here is some in the same state as it was sent. Does it look like the cotton you generally see? Well, then, first of all it must be cleaned, and after that we say it has to be spun into threads. See, here is some. You see I can easily break it. These threads are afterwards woven together, and at last we have a piece like this and call it calico. Can you easily break this? You can tear it if you pull it quickly. Now look at these pieces of calico and you will see that they are made up of threads crossing each other. When you are older, I will tell you more about the way the cotton is spun and woven into calico and stuff for dresses and other things.

III. **Summary.**—This should be written on the board as the lesson proceeds and afterwards written by the children on their slates. The elder children might write it from memory.

Cotton is made into calico, stuffs for dresses, and sewing cotton.

Cotton is made into curtains, blinds, sheets, and quilts.

The cotton-plant grows in hot countries.

Cotton is the soft substance round the seeds.

Many things are done to the cotton before it is ready for use.

SECTION IV.—COMMON EMPLOYMENTS.

THE FISHERMAN.

What do you sometimes have for dinner instead of meat? Fish. Tell me the names of some of the different kinds of fish? Herrings, cod, haddocks, plaice, salmon. Where does your mother get the fish? From the fishmonger and sometimes from the fish-market. But where do these people get the fish? From the man who catches it. What do we call the men who catch fish? They are called fishermen. Where do the fishermen find the fish? Then where would you expect to see fishermen? Who has been to the sea-side? Well, Mary, have you seen a fisherman? How did you know he was one? By his dress. How was he dressed? He had on a very thick, warm coat, like a jersey. And what else did you notice? He had very high, thick boots nearly up to his knees. A very big cap with a piece hanging down his back. Well, here is a picture of one; is it like the dress you saw? Why does the fisherman need all these thick things? Because he has to go on the sea. Well, let us talk about the work he has to do. You told me he has to catch fish—where does he do this? On the sea. How does he get on the sea? In a boat. Yes, these boats are called fishing boats. Can you tell me anything about them? They often have one or two sails. Of what use are the sails? They help the boat along. What does the fisherman take in his boat? He takes nets and long lines. What are on the long lines? Hooks. What does the fisherman put on the hooks? Well, Harry? I saw a man putting worms on. And you, John? The fisherman I saw put small fishes and mussels on the hooks. We call all these different things by one name. What is it? We say they are bait. What is the use of the bait? It helps to catch the fish. If you put the line in the water without bait could you catch the fish? No, the fish would not come to the hooks. The bait is put over the hooks, and the fish only thinks it is going to eat some food and swallows the hook. Another day I will tell you how the fisherman uses the net. Can you tell me when the fisherman goes out to fish? Yes, in the evening. And how long does he stay out? Sometimes he stays out more than one night. Then, you see, he has to take food with him. When he comes back he sometimes has a boat full of fish. What does he do with it? He sends it to the market. Now, you can tell me why the fisherman needs such a thick coat and warm cap. Yes, sometimes it is very cold, indeed, on the water. Why do you think he wants those thick, high boots? Sometimes he has to get out of his boat and pull it on to the land. What do we call the land by the sea? The beach, the shore. Well, if the fisherman had only the same kind of boots that we wear he would get very wet. Sometimes when he is out fishing the water gets into his boat, and then these thick boots help to keep him dry.

What makes the fisherman look so strong, and gives him such a red face? Have any of you noticed how brown and red your faces get when you go to the seaside? Then you see the fisherman is so much on the sea. What kind of hands has he? Very rough, strong ones. What makes them like this? Yes, he has to pull the ropes of his boats, and sometimes very heavy loads of fish. Does he like doing this? Yes, because he knows he will have more fish to sell. I suppose you think it is very nice to be a fisherman, and go out on the water in a boat. But you must remember that the fisherman has to go out at night when it is very cold, and he must go even when it rains. Sometimes the wind blows very hard and the poor fishermen are drowned. Then he sometimes works very hard all night and does not catch any fish. So, you see, the fisherman's life is a very hard and dangerous one.

The teacher, by way of recapitulation, should get the children to describe the fisherman's dress, his work, the kind of life he leads, and what kind of men are required for this life.

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